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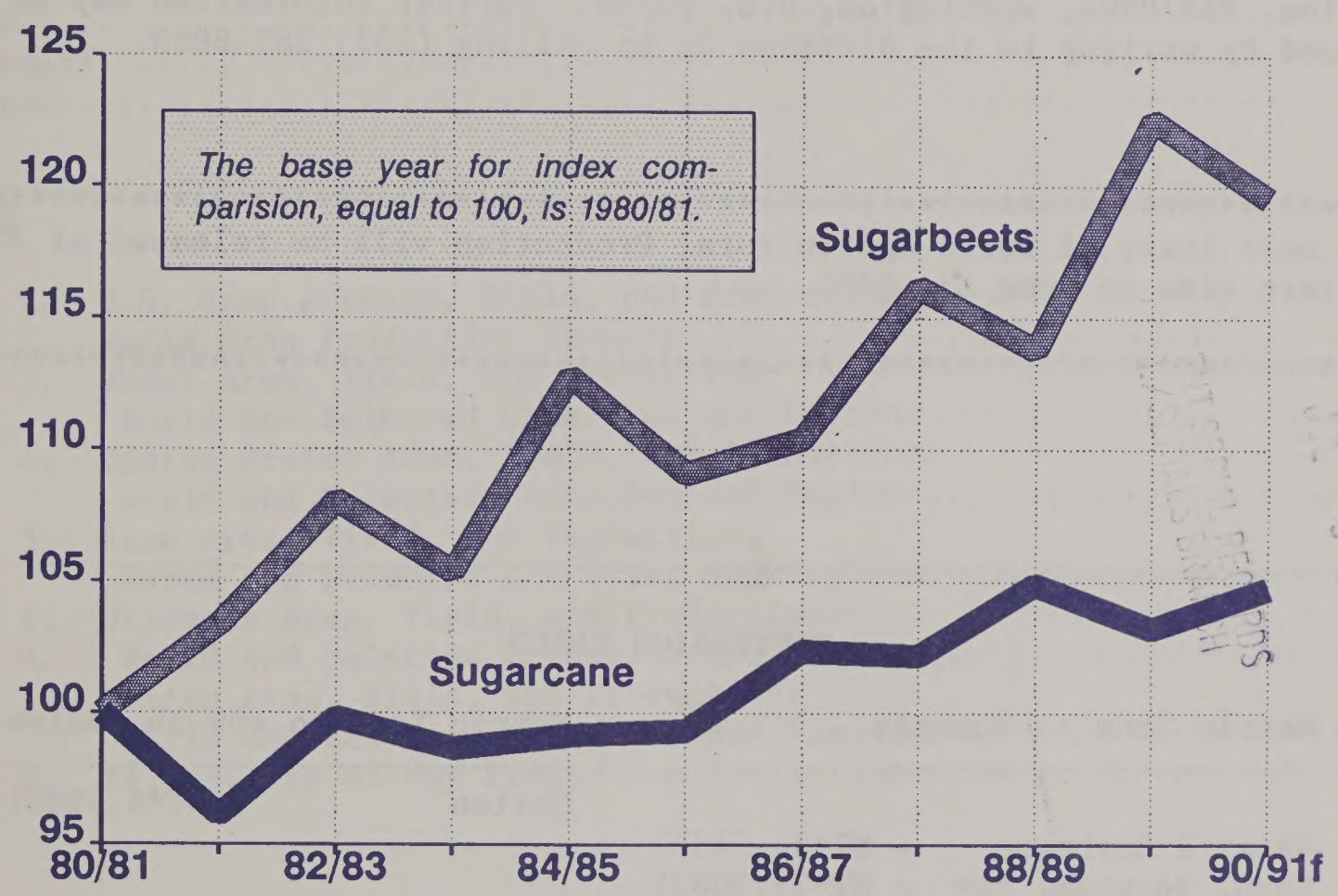
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May 1990

# World Agricultural Production

## Index of World Sugar Yields



### Inside This Issue.....

- World Sugar Production
- World Dairy Production
- World Dried Fruit Production
- North Africa Grain Production



This report was prepared by the Production Estimates and Crop Assessment Division, FAS/USDA, Washington, D.C. 20250. Further information may be obtained by writing to the division or by calling (202) 382-8888.

\*\*\*\*\*  
 \* The next issue of World Agricultural Production will be released at 3 p.m. \*  
 \* eastern time on June 13, 1990. \*  
 \* \*  
 \*\*\*\*\*

CONVERSION TABLE			
Metric Tons to Bushels		Metric Tons to 480-lb. Bales	
-----		-----	
Wheat & Soybeans = MT*36.7437		Cotton = MT*4.592917	
Corn, Sorghum, Rye = MT*39.36825			
Barley = MT*45.929625			
Oats = MT*68.894438		Metric Tons to Hundredweight	
-----		-----	
1 hectare = 2.471044 acres		Rice = MT*22.04622	
1 kilogram = 2.204622 pounds			



## TABLE OF CONTENTS

<u>SUBJECT</u>	<u>PAGE</u>
<u>PRODUCTION HIGHLIGHTS FOR 1990/91</u>	
Wheat.....	5
Coarse Grains.....	6
Rice.....	8
Oilseeds.....	8
Cotton.....	8
<u>PRODUCTION HIGHLIGHTS FOR 1989/90</u>	
Wheat.....	9
Coarse Grains.....	9
Rice.....	9
Oilseeds.....	9
Cotton.....	11
<u>TABLES</u>	
Table 1. U.S. Crop Acreage, Yield, and Production.....	12
Table 2. World Crop Production Summary.....	13
Table 3. Wheat Area, Yield, and Production: World and Selected Countries and Regions.....	14
Table 4. Coarse Grains Area, Yield, and Production: World and Selected Countries and Regions.....	15
Table 5. Rice Area, Yield, and Production: World and Selected Countries and Regions.....	18
Table 6. Oilseeds Area, Yield, and Production: World and Selected Countries and Regions.....	19
Table 7. Cotton Area, Yield, and Production: World and Selected Countries and Regions.....	21
Table 8. Reliability of May Production Projections.....	22
<u>MAPS</u>	
Map 1. World Agricultural Weather Highlights.....	23
<u>WEATHER BRIEFS</u>	
Heavy Rains Cease in Eastern Australia.....	24
Severe Drought in Ecuador.....	24
Philippine Drought Relief.....	24



## PRODUCTION BRIEFS

Brazil: Coffee Production Revised Downward.....	25
Brazil: Summer Crop Harvest Progress.....	25
Brazil: Wheat Planting Situation.....	25
Brazil: Weather Damages 1989/90 Apple Crop.....	26
Brazil: Smaller Orange Crop Forecast.....	26
Argentina: Citrus Crop at a New Record.....	26
Argentina: Wheat Planting Prospects.....	27
China: Diseases and Pests Threaten Winter Wheat .....	27
China: Rapeseed Crop Looks Promising.....	27
USSR: Meat and Egg Production Down, Milk Production Up.....	27
Australia: Severe Flooding Affects Agriculture.....	28
Chile: Phytosanitary Quarantine Lifted.....	28
Federal Republic of Germany: Timber Losses Revised Upward.....	28
Taiwan: Rain Damages Fruit and Vegetable Crops.....	28
Europe: April Freeze Damages Horticultural Crops.....	29

## FEATURE COMMODITY ARTICLES

World Centrifugal sugar Production.....	30
Dairy Production Forecasts for Selected Countries.....	44
World Production of Dried Prunes.....	52
World Production of Raisins and Sultanas.....	54
Winter Grains Production in Northwest Africa.....	56

## FEATURE TABLES

Table 9. World Centrifugal Sugar Production.....	33
Table 10. Sugarcane Area Harvested, Yield and Production by Selected Sugarbeet Producing Countries.....	37
Table 11. Sugarbeet Area Harvested, Yield and Production by Selected Sugarbeet Producing Countries.....	41
Table 12. Milk Cow Numbers in Selected Countries.....	46
Table 13. Cow Milk Production in Selected Countries.....	47
Table 14. Butter Production in Selected Countries.....	48
Table 15. Cheese Production in Selected Countries.....	49
Table 16. Nonfat Dry Milk Production in Selected Countries.....	50
Table 17. Casein Production in Selected Countries.....	51
Table 18. Dried Prunes: Production in Selected Countries.....	53
Table 19. Raisins/Sultanas: Production in Selected Countries.....	55
Table 20. Algeria: Grain Production.....	60
Table 21. Morocco: Grain Production.....	61
Table 22. Tunisia: Grain Production.....	62

## CHARTS

Chart 1. Wheat Production in Selected North African Countries.....	63
Chart 2. Barley Production in Selected North African Countries.....	64
Chart 3. Total Northwest African Grain Production.....	65



## PRODUCTION HIGHLIGHTS FOR 1990/91

**WHEAT:** World production for 1990/91 is projected at a record 568.2 million metric tons, up 33.0 million or 6 percent from the 1989/90 harvest. Important changes from the 1989/90 crop include the following:

- o    United States      Production is projected at 73.3 million tons, up 17.9 million or 32 percent from 1989/90.
- o    USSR                Production is projected at 95.0 million tons, up 4.5 million or 5 percent from 1989/90.
- o    Argentina          Production is projected at 11.5 million tons, up 1.4 million or 13 percent. Harvested area is expected to be up by 10 percent, and yields are expected to be near average.
- o    Australia          Production is projected at 14.5 million tons, down 0.2 million or 1 percent from 1989/90 harvest. Farmers are expected to increase wheat area by roughly 10 percent in response to good planting moisture, while yields are estimated below the previous year's near-record.
- o    Brazil                Production is projected at 5.1 million tons, down 0.5 million or 8 percent from 1989/90. Area is expected to decline 5 percent because of a combination of the high cost of production credit and a late 1989/90 soybean harvest.
- o    Canada              Production is projected at 26.5 million tons, up 2.1 million or nearly 9 percent. Significantly higher area reflecting a shift away from soybeans and flaxseed, and average yields account for the expected gains.
- o    China                Production is projected at a record 93.0 million tons, up 2.0 million or 2 percent from 1989/90. Winter wheat area increased by an estimated 400,000 hectares and higher yields are expected due to better conditions this season. Planting conditions for the spring wheat crop also have been favorable.



- o East Europe Production is projected at 43.2 million tons, up 0.9 million tons or 2 percent from the 1989/90 crop. The increase is due primarily to larger estimated output in Czechoslovakia and the German Democratic Republic.
- o EC-12 Production is projected at 80.5 million tons, up 1.9 million or 2 percent from last year. Despite a projected 0.6 million-hectare reduction in area, largely reflecting poor conditions in southern Europe, overall estimated yields continue to increase. The United Kingdom, the Federal Republic of Germany, and France have shifted to higher yielding varieties in an attempt to maintain profit margins.
- o India Production is projected at a record 54.0 million tons, little changed from last year's excellent harvest. Wheat area is estimated to have declined 2 percent, while yields were boosted by timely winter rainfall and cool temperatures.
- o Pakistan Production is projected at a record 15.0 million tons, up 0.6 million or 4 percent from 1989/90. Wheat area is estimated up slightly, with higher yields from good winter rainfall in the Punjab.
- o Turkey Production is estimated at 13.0 million tons, up 1.5 million or 13 percent from 1989/90. Yield is estimated above last year's drought-affected level, but below average due to dry winter weather.

**COARSE GRAINS:** World production for 1990/91 is projected at 819.9 million tons, up 21.4 million or 3 percent from last year. Important changes from the 1989/90 crop include the following:

- o United States Production is projected at 237.7 million tons, up 16.2 million or 7 percent from 1989/90. Larger corn, sorghum, and barley, but less oats production is expected.
- o USSR Production is projected at 106.5 million tons, down 0.5 million or less than 1 percent from the 1989/90 production estimate. Reductions in oats, rye, and millet more than offset an increase in estimated barley output.



- o Brazil Production is projected at 24.9 million tons, down 0.5 million or 2 percent from 1989/90. Corn area and yields are expected to decline. A lack of affordable credit at planting is expected to lower input use and decrease planting incentives.
- o Canada Production is projected at 23.8 million tons, up 0.3 million or 1 percent from 1989/90. Planting intentions showed declines in estimated area for barley, oats, and rye. Yields are estimated to be above last year's drought-affected level.
- o China Production is projected at 95.4 million tons, up 4.0 million or 5 percent from 1989/90. Corn production is estimated at a near-record 79.0 million tons, up 3.5 million from last year's drought-reduced crop, due to higher projected area and yield. Significant production increases also are forecast for sorghum and millet, while barley and oats production is expected to increase only slightly.
- o EC-12 Production is projected at 79.8 million tons, down 1.9 million or 2 percent from 1989/90. Although overall yields are estimated higher, reductions in barley and corn area are expected to more than offset the higher yields. While area reduction is spread throughout the EC-12; France and Spain will account for nearly two-thirds of the total.
- o East Europe Production is projected at 67.3 million tons, up 0.7 million or 1 percent from 1989/90. Smaller estimated production in Bulgaria and Poland are expected to be offset by gains in Hungary, Czechoslovakia, and East Germany.
- o India Production is estimated at 31.8 million tons, up 0.6 million or 2 percent from last year. Most of the estimated increase is attributed to the expected recovery in millet production from last year's drought conditions.
- o South Africa Production is projected at 9.3 million tons, unchanged from 1989/90. Corn output, at 8.5 million tons is unchanged as a similar harvested area is expected and average yields are assumed for the crop that will be planted in November 1990.
- o Turkey Production is projected at 8.0 million tons, up 0.6 million tons or 8 percent from 1989/90. The increase reflects a return to more normal yields following last year's severe drought.



**RICE (MILLED-BASIS):** World production for 1990/91 is projected at 340.1 million tons, down 0.7 million or less than 1 percent from the 1989/90 crop. Foreign production in 1990/91 is projected at 335.0 million tons, a decrease of 0.9 million or less than 1 percent from 1989/90. U.S. output is projected at 5.1 million tons, up 0.2 million or 4 percent from last season.

**OILSEEDS:** Total world oilseeds production for the 1990/91 is forecast at a record 222.0 million tons, up 9.4 million or 4 percent from the 1989/90 crop. Foreign production during 1990/91 is projected to be a record 161.0 million tons, up 7.8 million or 5 percent from last year. U.S. production is projected at 61.0 million tons, up 1.7 million or 3 percent from 1989/90.

**COTTON:** World production for 1990/91 is projected at 88.0 million bales, 10 percent more than the current season and second only to the record 89.0-million-bale crop harvested in 1984/85. U.S. production is projected at 16.0 million bales, 31 percent above last year and the largest crop since 1953/54. Total foreign production is projected at 72.0 million bales, a gain of more than 6 percent over 1989/90 and second only to the 1984/85 crop.



## PRODUCTION HIGHLIGHTS FOR 1989/90

**WHEAT:** World production for 1989/90 is estimated at 535.2 million metric tons, up 0.3 million or less than 1 percent from last month. An upward revision was made in Australia.

**COARSE GRAINS:** World production for 1989/90 is estimated at 798.5 million tons, up 0.7 million or less than 1 percent from last month. Estimates were raised in France, Spain, and Poland.

**RICE (MILLED-BASIS):** World production for 1989/90 is estimated at a record 340.8 million tons, up 0.9 million or less than 1 percent from last month. Upward revisions were made in Indonesia and Nigeria.

**OILSEEDS:** Total world oilseeds production for 1989/90 is estimated at a record 212.6 million tons. This month's estimate is down 0.7 million tons from last month but up by 9.9 million or 5 percent from last year's output. U.S. production is estimated at 59.3 million tons, down slightly from last month but up 9 million or 18 percent from last year.

- \* **Soybeans:** World production for 1989/90 is estimated at a record 106.7 million tons, down 0.4 million from last month but up 11.4 million or 12 percent from last year. Significant changes from last month include:

- o **Brazil** Production is estimated at 19.5 million tons, down 0.5 million or 3 percent from last month and down 16 percent from last year. The reduction is based on lower than expected yields as a result of unfavorable weather during the growing season combined with reduced input use.
- o **Mexico** Production is estimated at 0.9 million tons, up 0.1 million or 14 percent from last month and up 216 percent from last year. The increase is based on harvest results from a higher than anticipated area.

- \* **Cottonseed:** World production for 1989/90 is estimated at 30.9 million tons, down 0.1 million from last month and down 1.3 million or 4 percent from last year. Significant changes from last month include:



- o United States      Production is estimated at 4.2 million tons, down 2 percent from last month and down 1.3 million or 23 percent from last year. The downward adjustment reflects slightly increased harvested area and reduced yield expectations.
- o India              Production is estimated at 4.3 million tons, up 0.2 million or 4 percent from last month and up 0.7 million or 18 percent from last year. The increase reflects improved lint production prospects.
- \* Peanuts: World production for 1989/90 is estimated to be the second largest in history, at 22.0 million tons. May's production estimate is down slightly from last month and down 1.3 million or 6 percent from last year.
- \* Sunflowerseed: World production for 1989/90 is estimated at a record 21.5 million tons, down 0.2 million from last month, but up 1.1 million or 5 percent from last year. Significant changes from last month include:
  - o Argentina      Production is estimated at 3.8 million tons, down 0.1 million tons or 3 percent from last month, but up 16 percent from last year. The reduction is based on decreased yields due to hot, dry weather which affected early harvested sunflowers in principal northern production regions.
- \* Rapeseed: World production for 1989/90, estimated at 21.7 million tons, is the third largest on record, but represents a decline in production for the second consecutive year. The May estimate is down slightly from last month and down 0.9 million or 4 percent from last year.
- \* Flaxseed: World production for 1989/90 is estimated at 1.9 million tons, down slightly from last month but up 0.3 million or 17 percent from last year.
- \* Copra: World production for 1989/90 is estimated at 4.5 million tons, down slightly from last month, but up 0.3 million or 6 percent from last year. Copra production has ranged between 4.3 - 4.8 million tons for many years.
- \* Palm Kernels: World production for 1989/90 is estimated at a record 3.2 million tons, down slightly from last month, but up 0.3 million or 10 percent from last year.
- \* Palm Oil: World production for 1989/90 is estimated at a record 10.4 million tons, down slightly from last month, but up 1.0 million or 10 percent from last year.



**COTTON:** World cotton production for 1989/90 is estimated at 79.9 million bales, up slightly from the previous month's estimate, but down 4.7 million bales or 5.6 percent from last year. U.S. production is estimated at 12.2 million bales, up slightly from last month but 21 percent below 1988/89. Foreign production is estimated at 67.7 million bales, up marginally from last month but 2.1 percent below 1988/89.

- o    **Argentina**           Production is estimated at 1.2 million bales, down 0.1 million or 8 percent from last month, but up 34 percent from last year. Decreased area and slightly decreased yields contributed to the reduction. Excessive rain in the important growing regions of Chaco and Formosa led to some abandonment of low-lying regions and to the reduction in yield.
  
- o    **Australia**        Production is estimated at 1.3 million bales, down 0.1 million or 7 percent from last month, and down 1.1 percent from last year. The decline is attributed to yield losses resulting from torrential rains in the cotton zone of east Australia.
  
- o    **India**             Production is estimated at a record 9.8 million bales, up 0.4 million or 4 percent from last month, and up 18 percent from last year. The production increase is attributed to higher yields during the favorable summer monsoon in north India, along with increased usage of fertilizer and high yield variety seed.



TABLE 1

## U.S. Crop Acreage, Yield, and Production 1/

COMMODITY	PLANTED AREA			HARVESTED AREA			YIELD			PRODUCTION		
	1988/89	1989/90	Proj. 1990/91	1988/89	1989/90	Proj. 1990/91	1988/89	1989/90	Proj. 1990/91	1988/89	1989/90	Proj. 1990/91
	--Million Acres--			--Million Acres--			--Bushels per Acre--			--Million Bushels--		
All Wheat	65.5	76.6		53.2	62.1		34.1	32.8		1,812	2,036	2,692
Winter	48.8	55.1	57.2	39.8	41.5	50.8	39.2	35.1	41.1	1,562	1,454	2,092
Other	16.7	21.5		13.4	20.7		18.7	28.1		250	582	600
Rye	2.4	2.0		0.6	0.5		24.7	29.2		15	14	15
Soybeans	58.8	60.7		57.4	59.4		27.0	32.4		1,549	1,927	1,925
Corn	67.7	72.3		58.3	64.8		84.6	116.2		4,929	7,527	8,100
Sorghum	10.3	12.6		9.0	11.2		63.8	55.4		577	618	685
Barley	9.8	9.2		7.6	8.3		38.0	48.6		290	403	415
Oats	13.9	12.1		5.5	6.9		39.3	54.4		218	374	350
							--Pounds per Acre--			---Million CWT.---		
Rice	2.9	2.7		2.9	2.7		5,514	5,749		159.9	154.5	160.0
All Cotton	12.5	10.6		12.0	9.5		619	614		15.4	12.2	16.0
										---Million 480-Pound---		

1/ Estimates from USDA Agricultural Statistics Board for 1988/89, 1989/90 and winter wheat estimates for 1990/91.  
All other 1990/91 estimates are from USDA Interagency Commodity Estimates Committees.

MAY 1990

PRODUCTION ESTIMATES AND CROP ASSESSMENT DIVISION, FAS, USDA



TABLE 2

## World Crop Production Summary

Commodity	World	Total Foreign	North America		Europe		USSR	Asia				South America		Selected Other			All Other Countries			
			United States	Canada	Mexico	EC-12		Oth. W. Europe	Eastern Europe	China	India	Indonesia	Pakistan	Thailand	Argentina	Brazil		Australia	South Africa	Turkey
—Million Metric Tons—																				
<u>Wheat</u> 1988/89 1989/90 prel. 1990/91 proj.	500.8	451.4	49.3	16.0	3.2	74.7	3.9	84.4	85.4	46.2	0.0	12.7	0.0	8.4	5.8	14.1	3.5	15.0	17.8	
	535.2	479.8	55.4	24.4	3.9	78.6	4.4	90.5	91.0	54.0	0.0	14.4	0.0	10.2	5.6	14.7	2.2	11.5	15.9	
	May	568.2	494.9	73.3	26.5	3.6	80.5	4.5	95.0	93.0	54.0	0.0	15.0	0.0	11.5	5.1	14.5	2.4	13.0	16.9
<u>Coarse Grains</u> 1988/89 1989/90 prel. 1990/91 proj.	728.5	578.9	149.7	19.7	13.8	88.1	11.4	97.5	94.2	31.7	5.2	2.4	4.4	7.3	26.7	6.7	13.0	10.0	87.3	
	798.5	577.1	221.4	23.5	14.1	81.7	12.3	107.0	91.2	31.2	4.8	2.8	4.2	8.6	25.4	6.9	9.3	7.4	80.1	
	May	819.9	582.3	237.7	23.8	15.0	79.8	11.8	106.5	95.4	31.8	5.0	2.7	4.3	9.5	24.9	6.5	9.3	8.0	80.8
<u>Rice (Milled)</u> 1988/89 1989/90 1990/91	330.2	324.9	5.2	0.0	0.3	1.3	0.0	0.2	1.9	118.4	70.7	27.5	3.2	13.9	0.3	7.5	0.6	0.0	0.2	22.9
	340.8	335.9	4.9	0.0	0.4	1.3	0.0	0.2	1.8	125.3	70.0	29.1	3.2	13.9	0.3	6.3	0.6	0.0	0.2	23.5
	May	340.1	335.0	5.1																
<u>Total Grains 1/</u> 1988/89 1989/90 1990/91	1,559.5	1,355.2	204.2	35.7	17.2	164.1	15.2	183.8	298.0	148.6	32.7	18.3	18.4	16.0	40.0	21.3	16.6	25.2	199.8	
	1,674.5	1,392.8	281.8	47.8	18.4	161.6	16.6	199.3	307.5	155.2	33.9	20.4	18.1	19.1	37.2	22.2	11.5	19.1	195.8	
	May	1,728.2	1,412.2	316.0																
<u>Oilseeds 2/</u> 1988/89 1989/90 1990/91	209.5	148.5	61.0	5.9	1.2	12.4	0.5	5.3	33.7	14.4	1.7	3.2	0.6	14.0	19.7	0.9	1.0	2.0	20.2	
	202.7	152.4	50.3	5.9	1.0	11.4	0.6	5.1	30.6	19.1	2.0	3.2	0.7	10.6	24.6	1.7	0.9	2.3	20.3	
	May	212.6	153.3	59.3	4.9	1.4	10.6	0.7	5.9	29.2	18.8	1.9	3.3	0.8	15.6	21.0	0.8	0.9	2.3	21.8
—Million 480-Pound Bales—																				
<u>Cotton</u> 1988/89 1989/90 1990/91	84.6	69.1	15.4	0.0	1.4	1.6	0.0	0.1	12.6	19.1	8.3	0.0	6.6	0.2	0.9	3.4	1.3	0.3	3.0	10.5
	79.9	67.7	12.2	0.0	0.8	1.4	0.0	0.1	12.2	18.0	9.8	0.0	6.7	0.1	1.2	3.1	1.3	0.4	2.7	9.9
	May	88.0	72.0	16.0																

1/ Includes total of wheat, coarse grains, and rice (milled) shown above. Estimates of Soviet total grain production, including wheat, coarse grains, rice (rough), minor grains and pulses are 195.1 million tons in 1988/89, 211.1 million in 1989/90, and 215.0 million forecast in 1990/91.

2/ Totals for major regions and countries include the six major oilseeds shown elsewhere in this report, while world and total foreign also include copra and palm kernels for all countries.

Note: Entries of 0.0 indicate no reported or insignificant production.

May 1990

Production Estimates and Crop Assessment Division, FAS, USDA



TABLE 3

# Wheat Area, Yield, and Production World and Selected Countries and Regions

COUNTRY/REGION	AREA			YIELD			PRODUCTION		
	1988/89	Prel. 1989/90	Proj. 1990/91	1988/89	Prel. 1989/90	1990/91 Proj. May	1988/89	Prel. 1989/90	1990/91 Proj. May
	---Million Hectares---			---Metric Tons Per Hectare---			---Million Metric Tons---		
World	218.0	225.7		2.30	2.37		500.8	535.2	568.2
United States	21.5	25.2		2.29	2.20		49.3	55.4	73.3
Total Foreign	196.5	200.6	203.3	2.30	2.39	2.44	451.4	479.8	494.9
Maj. Foreign Exporters	42.1	44.3	45.6	2.69	2.89	2.92	113.1	127.8	133.0
Argentina	4.7	5.5	6.0	1.79	1.86	1.92	8.4	10.2	11.5
Australia	8.9	8.9	9.8	1.58	1.64	1.48	14.1	14.7	14.5
Canada	13.0	13.6	14.1	1.23	1.79	1.88	16.0	24.4	26.5
EC-12	15.5	16.3	15.7	4.81	4.83	5.14	74.7	78.6	80.5
Major Importers	95.9	97.0	97.9	2.39	2.46	2.51	229.3	238.9	245.7
Brazil	3.5	3.4	3.2	1.68	1.65	1.59	5.8	5.6	5.1
China	28.8	29.8	30.2	2.97	3.05	3.08	85.4	91.0	93.0
Eastern Europe	10.7	10.7	10.7	4.17	3.96	4.03	44.7	42.3	43.2
Egypt	0.6	0.6	0.7	4.76	5.05	5.38	2.8	3.2	3.5
Other N. Africa 1/	4.0	4.7	4.8	1.26	1.13	1.02	5.0	5.3	4.9
Japan	0.3	0.3	0.3	3.62	3.47	3.52	1.0	1.0	1.0
USSR	48.1	47.5	48.0	1.76	1.91	1.98	84.4	90.5	95.0
Other Foreign	58.5	59.3	59.8	1.86	1.91	1.94	109.0	113.1	116.2
India	23.1	24.1	23.7	2.00	2.24	2.28	46.2	54.0	54.0
Iran	6.3	6.3	6.3	1.08	1.08	1.08	6.8	6.8	6.8
Mexico	0.8	1.0	0.9	4.00	4.11	4.11	3.2	3.9	3.6
Non-EC W. Europe	0.8	0.8	0.9	5.01	5.17	5.02	3.9	4.4	4.5
Pakistan	7.3	7.7	7.8	1.73	1.87	1.92	12.7	14.4	15.0
South Africa	2.0	1.8	1.9	1.78	1.19	1.30	3.5	2.2	2.4
Turkey	8.8	8.7	8.8	1.71	1.32	1.49	15.0	11.5	13.0
Others	9.6	8.8	9.6	1.86	1.81	1.76	17.8	15.9	16.9

1/ Algeria, Libya, Morocco, and Tunisia.

MAY 1990

Production Estimates and Crop Assessment Division, FAS, USDA



TABLE 4  
Coarse Grains Area, Yield, and Production  
World and Selected Countries and Regions

COUNTRY/REGION	AREA			YIELD			PRODUCTION		
	1988/89	Prel. 1989/90	Proj. 1990/91	1988/89	Prel. 1989/90	1990/91 Proj. May	1988/89	Prel. 1989/90	1990/91 Proj. May
<b><i>TOTAL COARSE GRAINS</i></b>	---Million Hectares---			---Metric Tons Per Hectare---			---Million Metric Tons---		
World	325.5	323.7		2.24	2.47		728.5	798.5	819.9
United States	32.8	37.1		4.56	5.97		149.7	221.4	237.7
Total Foreign	292.7	286.6	288.4	1.98	2.01	2.02	578.9	577.1	582.3
Maj. Foreign Exporters	20.8	21.6	21.7	2.46	2.43	2.46	51.1	52.5	53.4
Argentina	2.9	3.1	3.3	2.49	2.75	2.85	7.3	8.6	9.5
Australia	4.4	4.0	4.2	1.52	1.72	1.53	6.7	6.9	6.5
Canada	7.1	8.5	8.2	2.76	2.77	2.89	19.7	23.5	23.8
South Africa	4.6	4.4	4.4	2.86	2.11	2.11	13.0	9.3	9.3
Thailand	1.8	1.6	1.5	2.50	2.71	2.89	4.4	4.2	4.3
Major Importers	106.5	103.9	103.2	2.55	2.72	2.73	271.8	283.1	281.8
Eastern Europe	18.4	18.5	18.4	3.24	3.61	3.65	59.5	66.6	67.3
EC-12	19.2	18.5	17.9	4.60	4.41	4.45	88.1	81.7	79.8
Other W. Europe	3.2	3.1	3.0	3.54	3.96	3.91	11.4	12.3	11.8
Mexico	7.5	7.5	7.9	1.85	1.89	1.90	13.8	14.1	15.0
USSR	57.8	55.9	55.5	1.69	1.91	1.92	97.5	107.0	106.5
Other Major Import. 2/	0.5	0.4	0.4	3.40	3.34	3.34	1.5	1.4	1.4
Other Foreign	165.4	161.1	163.4	1.55	1.50	1.51	256.0	241.5	247.0
Brazil	13.4	13.4	13.3	2.00	1.90	1.88	26.7	25.4	24.9
China	28.3	28.4	28.7	3.33	3.21	3.33	94.2	91.2	95.4
India	39.1	38.6	39.4	0.81	0.81	0.81	31.7	31.2	31.8
Indonesia	2.9	2.6	2.8	1.82	1.85	1.79	5.2	4.8	5.0
Nigeria	10.1	9.9	10.1	0.84	0.82	0.84	8.5	8.1	8.5
Philippines	3.8	3.6	3.7	1.21	1.21	1.18	4.5	4.4	4.3
Turkey	4.4	4.4	4.5	2.29	1.68	1.80	10.0	7.4	8.0
Others	63.6	60.2	61.1	1.18	1.15	1.13	75.1	68.9	69.1
<b><i>BARLEY</i></b>									
World	77.4	74.3		2.15	2.27		166.4	168.5	170.3
United States	3.1	3.4		2.04	2.61		6.3	8.8	9.0
Total Foreign	74.3	71.0	72.2	2.15	2.25	2.23	160.0	159.7	161.2
Australia	2.2	2.3	2.4	1.47	1.75	1.52	3.3	4.1	3.6
Canada	4.2	4.9	4.8	2.46	2.39	2.60	10.2	11.7	12.5
China	3.7	3.3	3.3	1.67	1.74	1.73	6.2	5.7	5.7
Eastern Europe	4.4	4.5	4.4	3.72	3.98	3.85	16.3	18.0	17.1
EC-12	12.2	11.7	11.3	4.14	3.93	4.04	50.3	46.1	45.8
Other W. Europe	1.7	1.5	1.5	3.30	3.82	3.68	5.7	5.8	5.6
Turkey	3.3	3.4	3.4	2.12	1.46	1.62	7.0	4.9	5.5
USSR	29.7	27.5	28.5	1.50	1.80	1.81	44.5	49.5	51.5
Others	12.9	11.9	12.6	1.28	1.18	1.11	16.6	14.0	13.9

FOOTNOTES AT END OF TABLE

CONTINUED

May 1990

Production Estimates and Crop Assessment Division, FAS, USDA



TABLE 4 (Continued)  
Coarse Grains Area, Yield, and Production  
World and Selected Countries and Regions

COUNTRY/REGION	AREA			YIELD			PRODUCTION		
	Prel. 1988/89	Proj. 1989/90	1990/91	Prel. 1988/89	1990/91 1989/90	Proj. May	Prel. 1988/89	1990/91 1989/90	Proj. May
<b><u>CORN</u></b>	---Million Hectares---			---Metric Tons Per Hectare---			---Million Metric Tons---		
World	124.8	126.9		3.20	3.62		399.4	459.6	479.6
United States	23.6	26.2		5.31	7.29		125.2	191.2	205.7
Total Foreign	101.3	100.7	101.8	2.71	2.67	2.69	274.2	268.4	273.9
Maj. Foreign Exporters	7.1	6.7	6.9	3.05	2.69	2.77	21.6	18.0	19.1
Argentina	1.7	1.7	2.0	2.94	3.24	3.33	5.0	5.5	6.5
South Africa	3.8	3.6	3.6	3.28	2.36	2.36	12.4	8.5	8.5
Thailand	1.6	1.4	1.4	2.63	2.86	3.04	4.2	4.0	4.1
Major Importers	22.3	21.9	22.1	3.73	3.85	3.86	83.0	84.2	85.4
Eastern Europe	7.4	7.4	7.5	3.50	4.02	4.26	26.0	29.8	31.8
EC-12	4.1	3.9	3.6	7.00	6.89	6.84	28.5	26.5	24.7
Other W. Europe	0.2	0.2	0.2	8.55	7.68	8.35	1.9	1.7	1.8
Mexico	6.0	5.8	6.2	1.68	1.68	1.72	10.1	9.8	10.7
USSR	4.4	4.5	4.5	3.62	3.56	3.56	16.0	16.0	16.0
Other Maj. Import. 2/	0.1	0.1	0.1	4.20	4.17	4.14	0.4	0.5	0.5
Other Foreign	71.9	72.1	72.8	2.36	2.31	2.33	169.6	166.2	169.3
Brazil	12.9	12.8	12.7	2.02	1.91	1.89	26.1	24.5	24.0
Canada	1.0	1.0	1.0	5.47	6.56	6.00	5.4	6.4	6.0
China	19.7	20.3	20.5	3.93	3.72	3.85	77.4	75.5	79.0
Egypt	0.8	0.8	0.9	5.20	5.37	5.41	4.3	4.5	4.6
India	5.9	6.0	6.0	1.40	1.33	1.33	8.3	8.0	8.0
Indonesia	2.9	2.6	2.8	1.82	1.85	1.79	5.2	4.8	5.0
Philippines	3.8	3.6	3.7	1.21	1.21	1.18	4.5	4.4	4.3
Zimbabwe	1.2	1.2	1.2	1.56	1.63	1.70	1.9	2.0	2.1
Others	23.7	23.7	24.1	1.54	1.52	1.51	36.5	36.1	36.3
<b><u>SORGHUM</u></b>									
World	42.8	43.0		1.29	1.29		55.3	55.7	58.0
United States	3.7	4.5		4.00	3.48		14.6	15.7	17.4
Total Foreign	39.1	38.5	38.5	1.04	1.04	1.06	40.7	40.0	40.6
Argentina	0.6	0.7	0.7	2.33	2.86	3.00	1.4	2.0	2.1
Australia	0.7	0.4	0.6	1.65	2.04	2.13	1.2	0.8	1.1
China	1.8	1.8	1.8	3.14	2.94	3.02	5.6	5.4	5.5
India	14.8	15.5	15.3	0.71	0.74	0.75	10.5	11.5	11.5
Mexico	1.1	1.3	1.3	2.83	2.92	2.88	3.1	3.8	3.8
Nigeria	4.4	4.4	4.4	0.80	0.80	0.80	3.5	3.5	3.5
South Africa	0.3	0.3	0.3	1.58	1.65	1.65	0.4	0.5	0.5
Sudan	5.3	4.1	4.4	0.83	0.61	0.64	4.4	2.5	2.8
Thailand	0.2	0.2	0.1	1.35	1.33	1.43	0.2	0.2	0.2
Others	9.9	9.8	9.6	1.04	1.00	1.01	10.3	9.8	9.7

FOOTNOTES AT END OF TABLE

CONTINUED

May 1990

Production Estimates and Crop Assessment Division, FAS, USDA



TABLE 4 (Continued)  
**Coarse Grains Area, Yield, and Production**  
**World and Selected Countries and Regions**

COUNTRY/REGION	AREA			YIELD			PRODUCTION		
	Prel.		Proj.	Prel.		1990/91 Proj.	Prel.		1990/91 Proj.
	1988/89	1989/90	1990/91	1988/89	1989/90	May	1988/89	1989/90	May
<b><u>OATS</u></b>	---Million Hectares---			---Metric Tons Per Hectare---			---Million Metric Tons---		
World	22.1	22.6		1.70	1.84		37.6	41.6	39.4
United States	2.2	2.8		1.41	1.95		3.2	5.4	5.1
Total Foreign	19.9	19.8	18.9	1.73	1.83	1.81	34.4	36.2	34.3
USSR	10.9	10.6	10.0	1.40	1.56	1.50	15.3	16.5	15.0
Maj. Foreign Exporters	3.5	3.7	3.5	1.94	1.97	2.00	6.8	7.4	7.1
Argentina	0.4	0.4	0.5	1.27	1.44	1.33	0.5	0.6	0.6
Australia	1.3	1.2	1.1	1.49	1.51	1.36	2.0	1.7	1.5
Canada	1.4	1.8	1.6	2.18	2.03	2.19	3.0	3.5	3.5
Sweden	0.4	0.4	0.4	3.14	3.56	3.86	1.3	1.5	1.5
Other Foreign	5.4	5.4	5.4	2.28	2.26	2.27	12.4	12.3	12.2
China	0.6	0.6	0.6	1.19	1.15	1.21	0.7	0.6	0.7
Eastern Europe	1.4	1.4	1.4	2.62	2.70	2.68	3.7	3.7	3.7
East Germany	0.1	0.1	0.2	3.43	3.33	3.87	0.5	0.5	0.6
Poland	0.9	0.8	0.8	2.61	2.75	2.60	2.2	2.2	2.1
EC-12	1.8	1.7	1.7	3.10	2.77	2.93	5.5	4.7	5.0
France	0.3	0.3	0.2	3.77	3.78	3.80	1.0	1.0	0.9
West Germany	0.6	0.5	0.5	4.23	3.78	4.38	2.4	1.9	2.1
Finland	0.4	0.4	0.4	2.21	3.24	2.90	0.9	1.4	1.2
Norway	0.1	0.1	0.1	3.09	3.53	3.32	0.4	0.4	0.4
Others	1.2	1.3	1.2	1.09	1.09	1.09	1.3	1.4	1.4
<b><u>RYE</u></b>									
World	15.9	16.7		2.08	2.32		33.0	38.8	38.0
United States	0.2	0.2		1.55	1.76		0.4	0.3	0.4
Total Foreign	15.6	16.6	15.9	2.09	2.32	2.37	32.6	38.5	37.6
USSR	10.1	10.6	10.0	1.83	2.03	2.10	18.5	21.5	21.0
Maj. Foreign Exporter									
Canada	0.3	0.5	0.5	1.04	1.72	1.74	0.3	0.8	0.8
Other Foreign									
Eastern Europe	3.9	3.9	3.9	2.59	2.96	2.92	10.0	11.6	11.4
East Germany	0.6	0.6	0.6	2.94	3.34	3.77	1.8	2.1	2.3
Poland	2.9	2.9	2.9	2.52	2.94	2.80	7.2	8.6	8.2
Czechoslovakia	0.2	0.2	0.2	3.42	3.42	3.42	0.5	0.5	0.5
EC-12	0.9	1.0	1.0	3.05	3.31	3.22	2.9	3.2	3.2
Denmark	0.1	0.1	0.1	4.52	4.80	4.35	0.4	0.5	0.5
West Germany	0.4	0.4	0.4	4.19	4.69	4.47	1.6	1.8	1.9
Others	0.5	0.6	0.5	2.06	2.28	2.26	1.0	1.3	1.2

1/ Total of barley, corn, sorghum, oats, and rye shown below plus millet and mixed grain.

2/ Japan, Republic of Korea, and Taiwan.

May 1990

Production Estimates and Crop Assessment Division, FAS, USDA



TABLE 5

## Rice Area, Yield, and Production World and Selected Countries and Regions

COUNTRY/REGION	AREA		YIELD		PRODUCTION (Rough Basis)		MILLING RATE		PRODUCTION (Milled Basis)	
	Prel. 1988/89	Proj. 1990/91	Prel. 1988/89	1990/91 Proj. May	Prel. 1988/89	1990/91 Proj. May	Prel. 1988/89	1990/91 Proj. May	Prel. 1988/89	1990/91 Proj. May
World	—Million Hectares—		—Metric Tons Per Hectare—		—Million Metric Tons—		—In Percent—		—Million Metric Tons—	
United States	145.2	145.9	3.4	3.5	487.6	503.6	67.7	67.7	330.2	340.8
Total Foreign	1.2	1.1	6.2	6.4	7.3	7.0	72.1	70.0	5.2	4.9
Maj. Foreign Exporters	144.0	144.8	3.3	3.4	480.3	496.5	67.6	67.7	324.9	335.0
Burma	16.5	17.0	2.3	2.3	38.4	39.3	64.1	64.0	24.6	25.2
Pakistan	4.5	4.7	2.8	2.9	12.5	13.5	60.0	60.0	7.5	8.1
Thailand	2.0	2.1	2.4	2.3	4.8	4.8	66.7	66.7	3.2	3.2
	9.9	10.2	2.1	2.1	21.1	21.0	66.0	66.0	13.9	13.9
Major Importers	13.0	13.7	4.3	4.2	55.8	57.6	66.2	66.8	37.0	38.5
EC-12	0.3	0.3	5.6	6.0	2.0	2.0	67.3	67.0	1.3	1.3
Indonesia	9.8	10.4	4.3	4.3	42.3	44.3	65.0	65.7	27.5	29.1
Nigeria	0.6	0.6	1.3	1.2	0.8	0.8	66.5	75.9	0.6	0.6
Republic of Korea	1.3	1.3	6.6	6.5	8.4	8.2	72.3	72.0	6.1	5.9
Other Maj. Import. 1/	1.0	1.0	2.3	2.3	2.3	2.4	65.4	65.4	1.5	1.6
Other Foreign	114.5	114.1	3.4	3.5	386.1	399.6	68.2	68.1	263.3	272.3
Australia	0.1	0.1	7.8	8.1	0.8	0.9	71.5	71.0	0.6	0.6
Bangladesh	10.2	10.7	2.3	2.5	23.3	26.6	66.7	66.7	15.6	17.7
Brazil	5.3	4.5	2.1	2.0	11.0	9.2	68.0	68.0	7.5	6.3
China	31.9	32.3	5.3	5.5	169.1	179.0	70.0	70.0	118.4	125.3
India	41.9	41.5	2.5	2.5	106.0	105.0	66.7	66.7	70.7	70.0
Japan	2.1	2.1	5.8	6.2	12.4	12.9	72.8	72.8	9.0	9.4
Philippines	3.4	3.4	2.7	2.7	9.2	9.2	65.0	65.0	6.0	6.0
USSR	0.7	0.7	4.3	4.2	2.9	2.7	65.0	65.0	1.9	1.8
Vietnam	5.8	5.9	2.9	3.1	16.8	18.0	65.0	65.0	10.9	11.7
Others	13.1	13.0	2.6	2.8	34.6	36.1	66.2	65.2	22.9	23.5

1/ Hong Kong, Iran, Iraq, Ivory Coast, and Saudi Arabia.

MAY 1990

Production Estimates and Crop Assessment Division, FAS, USDA



**TABLE 6**  
**Oilseeds Area, Yield, and Production**  
**World and Selected Countries and Regions**

COUNTRY/REGION	AREA			YIELD				PRODUCTION			
	Prel.		Proj.	Prel.		1989/90 Proj.		Prel.		1989/90 Proj.	
	1987/88	1988/89	1989/90	1987/88	1988/89	Apr.	May	1987/88	1988/89	Apr.	May
	---Million Hectares---			---Metric Tons Per Hectare---				---Million Metric Tons---			
<u>SOYBEANS</u>											
World	54.02	55.69	57.41	1.92	1.71	1.87	1.86	103.67	95.35	107.13	106.73
United States	23.14	23.22	24.03	2.28	1.82	2.18	2.18	52.75	42.15	52.44	52.44
Total Foreign	30.88	32.47	33.37	1.65	1.64	1.64	1.63	50.93	53.20	54.69	54.29
Maj. Foreign Exporters	14.78	16.17	16.30	1.88	1.83	1.87	1.84	27.72	29.60	30.50	30.00
Argentina	4.26	4.00	5.00	2.28	1.60	2.10	2.10	9.70	6.40	10.50	10.50
Brazil	10.52	12.17	11.30	1.71	1.91	1.77	1.73	18.02	23.20	20.00	19.50
Other Foreign	16.10	16.30	17.07	1.44	1.45	1.42	1.42	23.21	23.60	24.19	24.29
Canada	0.46	0.53	0.54	2.75	2.16	2.26	2.26	1.27	1.15	1.22	1.22
China	8.41	8.12	8.00	1.48	1.43	1.35	1.35	12.47	11.65	10.80	10.80
Eastern Europe	0.53	0.56	0.54	1.31	1.20	1.44	1.50	0.69	0.67	0.78	0.82
EC-12	0.56	0.52	0.61	3.16	3.21	2.91	2.91	1.78	1.66	1.78	1.78
India	1.54	1.66	1.90	0.58	0.91	0.89	0.89	0.90	1.50	1.70	1.70
Indonesia	0.95	1.18	1.00	1.00	1.02	1.05	1.05	0.95	1.20	1.05	1.05
Paraguay	0.62	0.85	0.98	1.79	1.90	1.84	1.84	1.10	1.62	1.80	1.80
USSR	0.78	0.76	0.83	0.91	1.16	1.11	1.11	0.71	0.88	0.92	0.92
Others	2.24	2.13	2.67	1.49	1.54	1.58	1.58	3.34	3.28	4.15	4.21
<u>COTTONSEED</u>											
World	31.51	33.74	32.98	0.99	0.95	0.94	0.94	31.30	32.21	31.07	30.93
United States	4.06	4.84	3.86	1.29	1.14	1.13	1.10	5.23	5.50	4.32	4.24
Total Foreign	27.46	28.91	29.12	0.95	0.92	0.92	0.92	26.06	26.72	26.75	26.69
China	4.84	5.53	5.36	1.49	1.27	1.25	1.25	7.22	7.05	6.70	6.70
India	6.46	7.30	7.40	0.50	0.49	0.55	0.58	3.20	3.60	4.09	4.26
Pakistan	2.57	2.50	2.71	1.14	1.14	1.08	1.08	2.94	2.85	2.92	2.92
USSR	3.53	3.43	3.33	1.27	1.42	1.46	1.46	4.49	4.87	4.85	4.85
Others	10.06	10.14	10.32	0.82	0.82	0.79	0.77	8.22	8.34	8.19	7.97
<u>PEANUTS</u>											
World	18.22	19.79	19.28	1.14	1.18	1.14	1.14	20.86	23.36	22.05	22.02
United States	0.63	0.66	0.67	2.62	2.74	2.72	2.72	1.64	1.81	1.81	1.81
Total Foreign	17.60	19.13	18.62	1.09	1.13	1.08	1.09	19.22	21.55	20.24	20.21
Argentina	0.19	0.15	0.18	2.34	1.62	2.31	2.06	0.45	0.24	0.37	0.37
China	3.02	2.91	2.96	2.04	1.95	1.79	1.79	6.17	5.69	5.30	5.30
India	6.84	8.43	8.10	0.86	1.07	0.99	0.99	5.85	9.00	8.00	8.00
Senegal	0.85	0.90	0.79	1.10	0.76	0.93	0.93	0.93	0.69	0.74	0.74
South Africa	0.15	0.19	0.19	1.33	1.24	1.24	1.24	0.20	0.23	0.23	0.23
Sudan	0.58	0.58	0.55	0.76	0.78	0.73	0.73	0.44	0.45	0.40	0.40
Others	5.97	5.98	5.85	0.87	0.88	0.87	0.88	5.18	5.25	5.20	5.17

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TABLE 6 (Continued)  
Oilseeds Area, Yield, and Production  
World and Selected Countries and Regions

COUNTRY/REGION	AREA			YIELD				PRODUCTION			
	Prel.		Proj.	Prel.		1989/90 Proj.		Prel.		1989/90 Proj.	
	1987/88	1988/89	1989/90	1987/88	1988/89	Apr.	May	1987/88	1988/89	Apr.	May
	---Million Hectares---			---Metric Tons Per Hectare---				---Million Metric Tons---			
<u>SUNFLOWERSEED</u>											
World	15.52	15.07	15.81	1.35	1.36	1.37	1.36	20.92	20.42	21.73	21.55
United States	0.72	0.78	0.74	1.65	1.05	1.10	1.10	1.18	0.81	0.81	0.81
Total Foreign	14.80	14.29	15.07	1.33	1.37	1.39	1.38	19.74	19.61	20.92	20.73
Argentina	2.06	2.30	2.90	1.36	1.39	1.34	1.31	2.80	3.20	3.90	3.80
China	0.89	0.83	0.73	1.40	1.42	1.34	1.34	1.24	1.18	0.98	0.98
EC-12	2.30	2.12	1.99	1.81	1.87	1.64	1.64	4.16	3.97	3.27	3.27
East Europe	1.38	1.31	1.32	1.74	1.62	1.84	1.80	2.40	2.13	2.45	2.37
USSR	4.16	4.28	4.40	1.46	1.44	1.59	1.59	6.08	6.16	7.00	7.00
Others	4.03	3.45	3.74	0.76	0.86	0.89	0.89	3.06	2.98	3.33	3.32
<u>RAPESEED</u>											
World	16.80	17.90	16.99	1.40	1.26	1.27	1.28	23.44	22.53	21.63	21.67
Total Foreign	16.80	17.90	16.99	1.40	1.26	1.27	1.28	23.44	22.53	21.63	21.67
Canada	2.67	3.67	2.91	1.44	1.17	1.05	1.05	3.85	4.31	3.06	3.06
China	5.27	4.94	4.99	1.25	1.02	1.09	1.09	6.61	5.04	5.44	5.44
EC-12	1.86	1.84	1.63	3.20	2.81	3.07	3.07	5.95	5.18	5.00	5.00
East Europe	0.92	0.88	1.00	2.35	2.50	2.57	2.60	2.17	2.19	2.57	2.60
India	4.62	4.87	4.80	0.75	0.86	0.79	0.79	3.46	4.20	3.80	3.80
Others	1.46	1.70	1.67	0.96	0.94	1.06	1.07	1.40	1.60	1.77	1.78
<u>FLAXSEED</u>											
World	3.99	3.68	3.97	0.57	0.45	0.48	0.49	2.27	1.66	1.92	1.95
United States	0.19	0.09	0.07	1.01	0.45	0.47	0.47	0.19	0.04	0.03	0.03
Total Foreign	3.80	3.59	3.90	0.55	0.45	0.48	0.49	2.08	1.62	1.88	1.91
Argentina	0.66	0.54	0.60	0.82	0.86	0.82	0.86	0.54	0.46	0.49	0.52
Canada	0.59	0.50	0.64	1.23	0.74	0.83	0.83	0.73	0.37	0.53	0.53
India	1.15	1.18	1.20	0.34	0.30	0.33	0.33	0.39	0.35	0.40	0.40
USSR	1.07	1.04	1.10	0.21	0.21	0.20	0.20	0.23	0.22	0.23	0.23
Others	0.33	0.33	0.36	0.59	0.66	0.67	0.66	0.20	0.22	0.24	0.24
<u>MAJOR OILSEEDS</u>	140.06	145.87	146.44	1.45	1.34	1.40	1.40	202.46	195.54	205.54	204.84
United States	28.73	29.58	29.37	2.12	1.70	2.02	2.02	60.99	50.31	59.42	59.34
Total Foreign	111.33	116.29	117.07	1.27	1.25	1.25	1.24	141.46	145.23	146.12	145.50
<u>COPRA</u>	--	--	--	--	--	--	--	4.35	4.27	4.56	4.53
<u>PALM KERNEL</u>	--	--	--	--	--	--	--	2.69	2.93	3.22	3.21
<u>TOTAL OILSEEDS</u>	--	--	--	--	--	--	--	209.49	202.74	213.32	212.59
<u>PALM OIL 1/</u>	--	--	--	--	--	--	--	8.36	9.42	10.42	10.37

1/ Not included in total oilseeds.



TABLE 7

## Cotton Area, Yield, and Production World and Selected Countries and Regions

COUNTRY/REGION	AREA			YIELD			PRODUCTION		
	Prel. 1988/89	Proj. 1989/90	Proj. 1990/91	Prel. 1988/89	1990/91 May	Proj. May	Prel. 1988/89	1990/91 May	Proj. May
	---Million Hectares---			---Kilograms Per Hectare---			---Million 480-Pound Bales---		
World	34.0	32.9		542	528		84.6	79.9	88.0
United States	4.8	3.9		694	688		15.4	12.2	16.0
Total Foreign	29.1	29.0	29.5	517	507	531	69.1	67.7	72.0
Maj. Foreign Exporters	13.5	13.4		750	714		46.4	43.9	
Australia	0.2	0.2		1538	1258		1.3	1.3	
Central America 1/	0.1	0.1		885	890		0.4	0.4	
China	5.5	5.4		751	731		19.1	18.0	
Egypt	0.4	0.4		718	639		1.4	1.3	
Mexico	0.3	0.2		1178	885		1.4	0.8	
Pakistan	2.5	2.7		570	539		6.6	6.7	
Sudan	0.3	0.3		437	396		0.7	0.6	
Turkey	0.7	0.7		919	807		3.0	2.7	
USSR	3.4	3.3		801	797		12.6	12.2	
Major Importers 2/	0.4	0.4		817	830		1.6	1.5	
Other Foreign	15.2	15.3		301	318		21.1	22.3	
Argentina	0.5	0.6		389	475		0.9	1.2	
Brazil	2.4	2.3		311	293		3.4	3.1	
India	7.3	7.4		247	288		8.3	9.8	
Syria	0.2	0.2		672	844		0.5	0.6	
Others	4.9	4.8		356	339		8.0	7.5	

1/ Nicaragua, Guatemala, El Salvador, Honduras, and Costa Rica.

2/ Western Europe, Eastern Europe, Japan, Hong Kong, Republic of Korea, and Taiwan.

May 1990

Production Estimates and Crop Assessment Division, FAS, USDA

TABLE 8

The table below presents a 9-year record of the difference between the May projections and the final estimates. Using world wheat production as an example, changes between May projections and the final estimates have averaged 13.9 million tons (2.8 percent) and ranged from -18.5 to 20.6 million tons. The May projection has been below the final 5 times and above the final 4 times.

### Reliability of Production Projections

COMMODITY AND REGION	PROJECTION AND FINAL ESTIMATES, 1981/82 – 1989/90 1/					
	Difference		Lowest	Highest	Below	Above
	Average	Average	Difference		Final	Final
	Percent	---Million Metric Tons---			Number of Years 2/	
<i>WHEAT</i>						
World	2.8	13.9	–18.5	20.6	5	4
U.S.	4.7	2.8	–4.3	9.8	4	5
Foreign	2.9	12.3	–20.9	20.0	5	4
<i>COARSE GRAINS 3/</i>						
World	3.7	27.7	–31.9	75.3	4	5
U.S.	14.1	25.3	–30.2	70.3	5	4
Foreign	2.1	11.5	–12.7	28.1	2	7
<i>RICE (Milled)</i>						
World	3.2	10.0	–21.8	11.4	6	3
U.S.	7.2	0.3	–1.0	0.5	4	5
Foreign	3.3	10.0	–22.0	11.2	6	3
<i>SOYBEANS</i>						
World	N/A	N/A	N/A	N/A	N/A	N/A
U.S.	9.2	4.4	–4.7	12.0	4	5
Foreign	N/A	N/A	N/A	N/A	N/A	N/A
		---Million 480-lb. Bales---				
<i>COTTON</i>						
World	4.5	3.6	–13.7	5.9	7	2
U.S.	11.6	1.5	–2.8	1.3	5	4
Foreign	3.8	2.6	–12.2	4.6	6	3
<u>UNITED STATES</u>		-----Million Bushels-----				
<i>CORN</i>	15.0	854	–990	2379	4	5
<i>SORGHUM</i>	16.2	122	–228	171	6	3
<i>BARLEY</i>	14.5	58	–73	206	4	5
<i>OATS</i>	23.3	75	–77	231	2	7

1/ The final estimate for 1981/82-1988/89 is defined as the November estimate following the marketing year and for 1989/90 last month's estimate.

2/ May not total nine if projection was the same as the final.

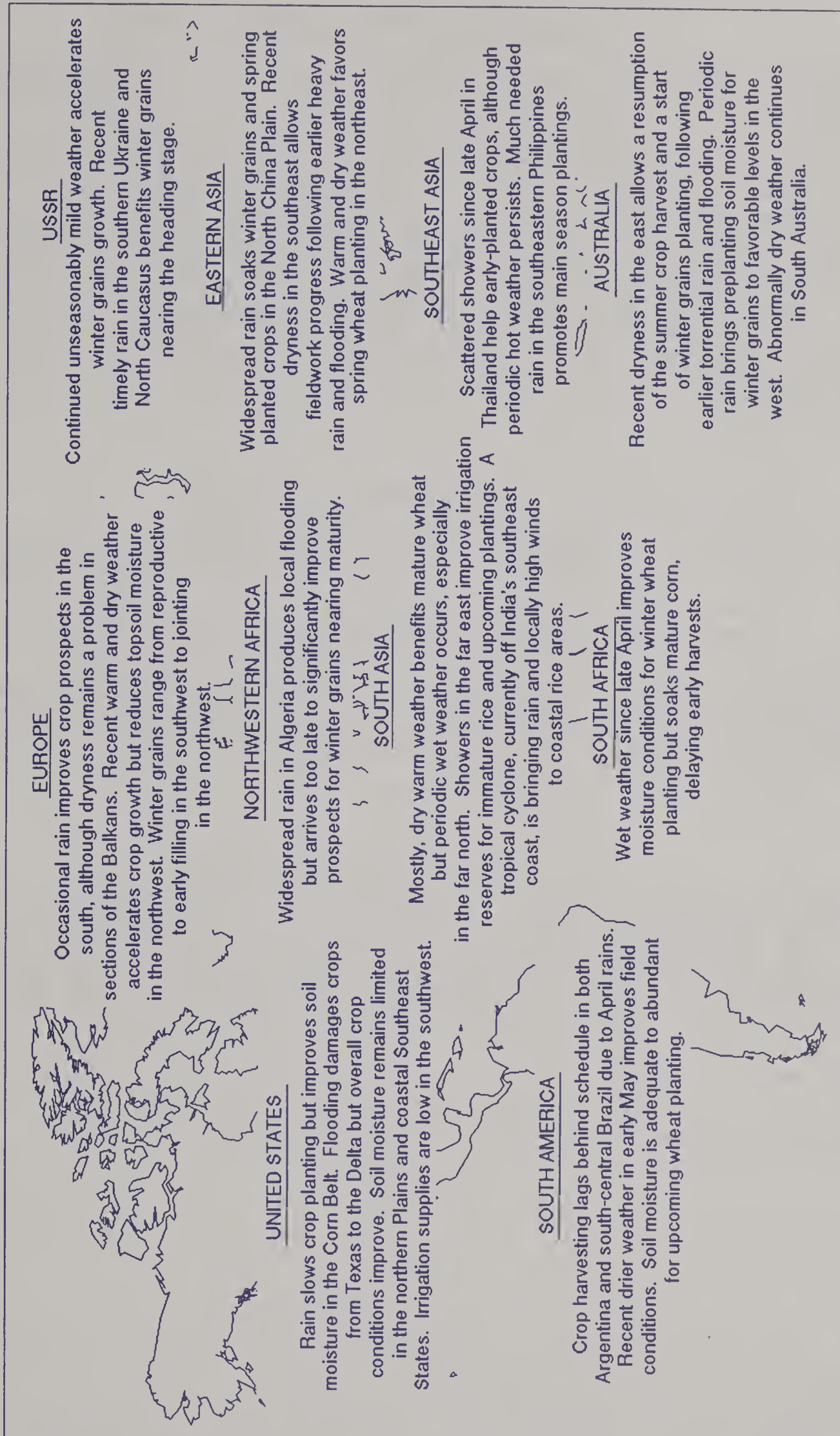
3/ Includes corn, sorghum, barley, oats, rye, millet, and mixed grain.



# WORLD AGRICULTURAL WEATHER HIGHLIGHTS

MAY 10, 1990

NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY



(More details are available in the Weekly Weather and Crop Bulletin.  
Subscription information may be obtained by calling (202) 447-7917.

## WEATHER BRIEFS

### HEAVY RAINS CEASE IN EASTERN AUSTRALIA

Torrential rains which plagued eastern Australia during the 4-week period ending April 21, caused significant flooding over an estimated 625,000 square mile area. Total rainfall amounts ranged between 10 inches in central New South Wales to 32 inches in central Queensland. This unusually heavy rainfall event ended abruptly the third week of April, and was followed by dry weather through May 10th. The excessive rainfall occurred over the entire sorghum and cotton growing region of the country, delaying harvest operations for a month. Harvesting resumed in early May with crop losses reported to be insignificant. Major flooding was reported to have been primarily located in outback and range areas of eastern Australia, lessening the impact to field crops. Planting operations for the upcoming winter grains season is well under way, and will benefit from the overall excellent soil moisture conditions in the affected states.

### SEVERE DROUGHT IN ECUADOR

A severe drought is adversely affecting crop production in Ecuador. The rainy season which usually starts in mid-December, began in mid-to-late January this year. January through April precipitation levels were well below normal. April is usually the start of the dry season, as heavy tropical activity migrates away from Ecuador, north into the northern hemisphere. Production levels of the "wet season" crops, corn, rice, and cotton have been significantly reduced from normal due to this drought. Outlook for dry season crops, planted in April and May are grim as levels of available water diminish.

### PHILIPPINE DROUGHT RELIEF

During the period of April 7 through May 8, 1990, much needed precipitation fell over southeastern and central Philippines, but hot, dry conditions continued in the north. Precipitation from April 22 to May 8, 1990 has provided timely moisture for planting in the central islands and Mindanao. During the first week of May local showers brought some relief to western and northern Luzon, where weather this winter and spring has been persistently hotter and drier than normal. In spite of these recent increases in precipitation, seasonal precipitation levels are well below normal. Production levels of all crops have been adversely affected.



## PRODUCTION BRIEFS

### BRAZIL: COFFEE PRODUCTION REVISED DOWNWARD

Brazil's 1990/91 coffee crop suffered damage from a lack of rainfall in key producing states and is now forecast at 33 million 60-kilogram bags based on a recent survey conducted by the U. S. agricultural officer in Rio de Janeiro. The new forecast is 4 million bags less than the previous estimate of 37 million (based on field travel in late January/early February) released in March 1990. (see Circular Series WAP 3-90 and 4-90) The recent field survey was carried out from April 19 to May 5, through the coffee producing areas in the states of Parana, Sao Paulo, and Minas Gerais. Coffee trees in the state of Parana showed no visible sign of stress and a load of normal size ripe cherries is about to be harvested. However, in the state of Sao Paulo in areas with light sandy loam soil, the load of cherries has developed to less than half of normal size due to scarce rainfall during the month of February. Elsewhere in Sao Paulo an exceptionally good load of cherries was observed. In southwest Minas Gerais the February dry spell did affect coffee trees in some isolated areas of the state, while in the southeastern section significant damage from drought was noted. However, western Minas Gerais coffee trees showed no drought damage or stress and should produce an above normal size crop. The new forecast includes assumptions about drought damage in the state of Espirito Santo.

### BRAZIL: SUMMER CROP HARVEST PROGRESS

The pace of the 1989/90 summer crop harvest (soybeans, cotton, and corn) increased during the first week in May, following the return of drier weather to Brazil's major producing regions. The harvest experienced delays during the past several weeks due to heavy rains, especially in the southern producing regions. Late planting of the 1989/90 crop, due to the late provision of credit last fall, led to delays in development and contributed to harvest delays. Many analysts have been concerned that Brazil's tight credit situation, brought about by the new administration's inflation-fighting measures, would also result in harvest delays. Shortage of money to pay labor has added to delays in the Center-South cotton growing region. However, liquidity problems have not delayed the soybean harvest, as producers have apparently been meeting harvest costs by selling soybeans when necessary.

### BRAZIL: WHEAT PLANTING SITUATION

Brazil's wheat growers are being hindered by credit limitations and planting delays. Brazil's President recently announced that the equivalent of US \$777 million of Government credit will be made available in May for use in financing summer crop storage and winter crop planting. The Government reportedly intends to provide a predetermined percentage of each producer's total credit needs at an annual interest rate of 12 percent adjusted by the cost of living index. Commercial lenders are offering credit at an inflation adjusted interest rate equivalent to 300 percent a year. Large scale producers can obtain only 50 percent of their production credit needs at the Government subsidized rate, medium sized producers, 60 percent; and small producers, 100 percent. The announcement was quite late in the season and was less generous than usual. Most Brazilian wheat producers double crop wheat with soybeans in order to provide year-round income and spread fixed production costs over more production. The 1989/90 crop soybean harvest has

been slowed by delayed maturity of late planted beans and by persistent rains at harvest time. This is resulting in some 1990/91 crop winter wheat planting delays. The late announcement of lower levels of Government subsidized credit and the late soybean harvest are leading many private analysts to forecast a sizable reduction in wheat plantings this year.

#### BRAZIL: WEATHER DAMAGES 1989/90 APPLE CROP

Inclement weather conditions have reduced Brazil's 1989/90 apple crop by approximately one-fifth, according to the U.S. agricultural officer in Rio de Janeiro. Production is currently estimated at 310,000 tons, sharply below the preliminary forecast of 390,000 tons, but 11 percent above the 1988/89 harvest of 280,000 tons. Most of the crop damage occurred during the ripening and harvesting periods. Unusually hot weather during February shriveled maturing fruits resulting in a loss of 8-10 percent of the crop. During late February and early March, unexpected hail storms caused additional losses. Rain during the remainder of March led to extensive fruit rot and boosted cumulative losses on the season to an estimated 21 percent.

#### BRAZIL: SMALLER ORANGE CROP FORECAST

Brazil's 1989/90 orange crop (harvesting to begin in July) is forecast down 2 million tons to 12 million, with Sao Paulo production estimated at 10.0 million tons compared to this year's record 12.0 million tons, according to the U.S. agricultural officer in Sao Paulo. The reduction is due to stress on trees from the heavy 1988/89 harvest and dry weather in October which affected fruit set from the first flowering. The 1988/89 orange crop estimate is revised up 5 percent from the December forecast to 14 million tons. The 1988/89 total citrus crop, with harvest just ending, is estimated at a record 15.07 million tons, up 4 percent from the December estimate.

#### ARGENTINA: CITRUS CROP AT A NEW RECORD

Argentina's 1989/90 citrus crop is forecast at 1.66 million tons, up 21 percent from the 1.37 million tons harvested this past year according to the U.S. agricultural counselor in Buenos Aires. The crop with harvest to begin in July, is estimated to be slightly above the previous record 1987/88 crop. Orange, lemon, and grapefruit harvests are projected up 30, 43, and 13 percent respectively. Tangerine production is forecast down 17 percent, reportedly due to a fungus disease. The orange crop is the largest in more than 10 years at 750,000 tons and the lemon crop at 500,000 tons is projected slightly below the 1987/88 record. The increases, following last year's drought reduced crop, are attributed to beneficial rains last spring and summer and may also be due to the influence of higher producer prices which are double the 1988/89 levels for oranges and lemons.



### ARGENTINA: WHEAT PLANTING PROSPECTS

Argentine farmers are expected to increase the 1990/91 planted area of winter wheat, according to the U.S. agricultural counselor in Buenos Aires. Planting has started and will continue through July; the crop should be harvested in November and December. The winter grain growing areas of Argentina reportedly have extremely favorable soil moisture for planting, germination, and early plant development. However, Argentine farmers are receiving mixed economic signals. World wheat prices are relatively strong but are declining. The Argentine inflation rate fell sharply in April but is still quite high and unpredictable. Reportedly a reduction in the grain export tax from the current 23.5 percent to 5 or 6 percent is under consideration, adding to the uncertainty.

### CHINA: DISEASES AND PESTS THREATEN WINTER WHEAT

Plant diseases and insect pests have spread across China's winter wheat production areas because of relatively high temperatures and excessive rain since the beginning of the year, according to China's Ministry of Agriculture. Powdery mildew and banded sclerotial diseases have been reported in the Yangtze and Huai He valleys. Stripe rust has appeared in central and western wheat-growing areas, while serious outbreaks of wheat scab, wheat midge and wheat aphids have been reported in many parts of the country. Local areas have been called upon to monitor the situation closely and take steps to control the spread of the diseases to ensure a good harvest.

### CHINA: RAPESEED CROP LOOKS PROMISING

According to a recent report in the Chinese press, rapeseed planted area increased by about 5 percent. The additional area came mainly from land that had previously remained fallow during winter, rather than a shift out of other crops. Most of the area increase was in the lower reaches of the Yangtze River, in the provinces of Hubei, Jiangxi, Jiangsu, and Anhui. Early rapeseed harvesting has begun in Sichuan and Yunnan provinces, and local officials are expecting a better crop than last year. The weather has been favorable in other areas as well and crops are reported to be in good condition. The harvest in more northern areas is expected to begin earlier than usual because of warm weather during March and April. Although excessive rainfall could cause problems with the harvest, the U.S. agricultural attache in Beijing is expecting a larger crop than last year.

### USSR: MEAT AND EGG PRODUCTION DOWN, MILK PRODUCTION UP

In the Soviet Union, first quarter results for State and Collective farms, which normally account for about 75 percent of total production, show meat production down 3 percent from January-March 1989. For the same periods, egg production was down 4 percent while milk production was up 3 percent. Soviet sources attribute the lower production of meat and eggs to insufficient feed supplies and poor management. Increased productivity allowed the milk production increase despite smaller milk cow numbers at the start of the year.

#### AUSTRALIA: SEVERE FLOODING IMPACTS AGRICULTURE

April floods inundated a large area in eastern Australia consisting mostly of rangeland and some summer cropland (see WEATHER BRIEFS elsewhere in this report). Preliminary reports indicate that cotton and sorghum production were not seriously affected, however, crop quality is expected to decline in both cases. Cotton and sorghum harvesting operations resumed in early May, after a 1-month delay. The livestock sector in this region is believed to have suffered the most damage. Early reports estimate that 200,000 sheep and 8,000 cattle were lost in the state of Queensland. These numbers are quite small in terms of national holdings of 185.6 million head of sheep and 24.9 million head of cattle. Large scale feeding operations were being conducted by helicopter, with feed dropped to animals gathered on high ground above the flood waters.

#### CHILE: PHYTOSANITARY QUARANTINE LIFTED

On April 30, 1990, the Chilean Ministry of Agriculture lifted the phytosanitary quarantine that was established on January 16, 1990 to control the spread of the Mediterranean fruit fly. Although the quarantine area spanned 890 hectares in the provinces of Los Andes and San Felipe, larvae and flies were detected only within the city limits of Los Andes. Of the 327 traps placed within the quarantine zone, only 8 larval sites and 20 adult flies--18 males and 2 females--were discovered during the 11-day period from January 15 through January 25. No adult flies were captured within the quarantine area after January 25, 1990, and none were ever found in any of the 1,021 traps located outside the quarantine zone's perimeter.

#### FEDERAL REPUBLIC OF GERMANY: TIMBER LOSSES REVISED UPWARD

February storm damage to West Germany's forests was more extensive than originally forecast, according to the U.S. agricultural counselor in Bonn. The preliminary damage estimate of 18 million cubic meters (CUM) has been revised upward to 45 million CUM and may run as high as 55 million CUM. Of the 45 million CUM, 35 million CUM are spruce; 5 million CUM, pine; 4 million CUM, beech; and 1 million CUM, oak. Approximately 65 percent of the damaged trees were uprooted; 35 percent broken off. Although projected losses are extraordinarily high, it does not appear that the German forest products industry will be seriously hurt. Apparently, most of the damage occurred in areas of high inventory stands where annual growth rates tend to exceed the annual cut.

#### TAIWAN: RAIN DAMAGES FRUIT AND VEGETABLE CROPS

According to the U.S. agricultural officer in Taipei, 14 consecutive days of heavy rainfall have resulted in severe damage to Taiwan's fruit and vegetable crops. Preliminary assessments indicate that production of fresh vegetables could decline by as much as 30 percent and fruit production by 20 percent. Taiwan's Provincial Department of Agriculture and Forestry is attempting to minimize the monetary impact on farmers by providing the necessary financial and technical assistance to allow for immediate replanting of the damaged areas with fast-growing vegetable crops.



## EUROPE: APRIL FREEZE DAMAGES HORTICULTURAL CROPS

A cold spell in Europe during early April reportedly caused extensive damage to fruit and vegetable crops. Preliminary damage assessments are as follows:

Austria: Low temperatures resulted in a minor reduction in pear and plum pollination. No significant damage to other fruit and vegetable crops.

Belgium: Heavy losses are expected in the apple and pear sectors. Other crops showing signs of damage include sweet and tart cherries and berries. No damage to vegetable crops was reported.

Finland: No damage to fruit and vegetable crops.

France: The April freeze apparently caused extensive damage to France's 1990/91 pear crop. To date, approximately 30-40 percent of the fall and winter pear crops have been lost. However, a bumper crop of summer pear varieties is expected to offset some of the loss. Total pear production for 1990/91 is currently forecast at 270,000-290,000 tons, 12 to 18 percent below the 1989/90 crop of 328,300 tons. The apple crop reportedly sustained far less damage. Production for 1990/91 is expected to total 1.8 million tons, slightly above the small 1989/90 crop of 1.75 million tons.

Germany, FRG: The freeze apparently caused serious damage to early crops of pears, plums and prunes, sweet cherries, and Boskoop, Jonagold, and Cox apples. Late-blooming varieties are expected to show significant quality damage.

Hungary: There was isolated damage to apricots, peaches, and some early vegetables in the northern part of the country. Seasonal losses are expected to be well below normal.

Italy: Apricot and kiwi blossoms were damaged during an earlier cold spell March 8-10. Minimal damage was reported during the April freeze.

Netherlands: Freeze damage reportedly will prevent a 1990/91 apple crop in excess of 300,000 tons. This would be approximately 65-70 percent of a normal-sized crop of 450,000 tons. At least one-half of the pear crop was lost. Production during the 1990/91 season is not expected to exceed 50,000-60,000 tons as against 113,000 tons produced last year.

Spain: Orchards were apparently in full bloom when the April freeze hit Lerida, Spain's leading deciduous fruit producing area. Early indications are that 20 to 30 percent of the apple, pear, peach, and nectarine crops have been lost.

Sweden: Summer apple varieties reportedly sustained minor blossom damage. Minimal crop losses are expected.

Switzerland: The April freeze reportedly caused no significant damage to fruit and vegetable crops. However, excessive rainfall during April is believed to have inhibited pollination of fruit crops.

Yugoslavia: Minimal crop losses are expected as a result of the low temperatures. However, heavy snowfall during the same time period apparently caused both limb breakage and tree damage.

## FEATURE COMMODITY ARTICLES

### WORLD CENTRIFUGAL SUGAR PRODUCTION

The first forecast for 1990/91 world centrifugal sugar production is 107.3 million tons (raw value), a record high and 1 percent or nearly 1.1 million tons above the previous year. World sugar production from cane is forecast at 68.6 million tons, 2 percent more than in 1989/90, while sugar from beets is down 1 percent to 38.7 million.

In the European Community (EC), which accounts for 14 percent of the world's total, sugar production is forecast to increase 1 percent, mainly as a result of expanded area. In France, the largest producer in the EC, sugar output is expected to increase 11 percent (472,000 tons) over the 89/90 crop. Reflected in the larger outturn is an increase in area of 39,000 hectares to 470,000. In West Germany, the second largest producer in the EC, sugar outturn is forecast up 3 percent because of a 25,000 hectare rise in beet area.

In India, the world's largest sugar producer, outturn for the 1990/91 season is forecast at a record 11.5 million tons, 3 percent above last year's previous record level. Although sugarcane yields have stagnated at about 60 tons per acre, the cane area harvested for centrifugal sugar has expanded by more than a half million hectares in the past five years. Khandsari and gur compete with sugar mills for sugarcane. Gur, a crudely crystallized brown type sugar is produced by small, on-farm units and consumed by rural people. Khandsari, a native semi-white centrifugal sugar, continues to be popular with Indian consumers because it is marginally cheaper than milled sugar. Of these two types, only khandsari is included in total centrifugal production.

In the Soviet Union, the world's second largest producer of sugar, the 1990/91 forecast is down 5 percent from a year earlier. The decline is attributed to reduced sugarbeet area and a return to near normal beet yields following last year's bumper harvest. Although the beet area forecast is down less than 1 percent from last year, the effects of the long term gradual downtrend of sugarbeet area is more apparent over a 10 year span. Sugarbeet area in the Soviet Union has declined by more than 425,000 hectares during this interim. Sugarbeets are not included in the USSR hard currency for domestic crop sales program. The exclusion of sugarbeets coupled with the desire to obtain hard currency may force a further shift out of sugarbeets into other crops. The sugarbeet sector has made the greatest use of intensive technology (IT) as a way of increasing yields and IT is presently used on close to 90 percent of all land sown to sugarbeets. By using IT, the USSR has been able to increase average sugarbeet yields from 21.8 tons per hectare in 1981-1985 to over 25 tons per hectare during the four most recent years (1986-1989).

In Brazil, the 1990/91 crop is forecast to remain at last year's level which was down about a million tons from the three previous years. Traditionally, Brazilian sugar and alcohol production have been controlled by the Institute for Alcohol and Sugar (IAA) which establishes annual production quotas for each mill. In establishing the level of sugar production, the IAA first



estimates total cane production, subtracts the cane needed for the year's alcohol production and then allocates the balance for sugar and molasses. The objective has been to meet domestic sugar and alcohol needs, with residual cane going to produce sugar for export. In recent years, this has caused problems due to stagnating cane production while domestic alcohol and sugar requirements were rising and the world sugar price was becoming more attractive. The IAA, although in the process of being eliminated, will reportedly issue a 1990/91 crop plan prior to its demise. The Central-South region has begun cutting sugarcane early again this year to ease the on-going domestic alcohol deficit.

Sugar production in Asia is forecast to increase in five of the six major producing countries. In China, sugar output is forecast to increase 5 percent over last year's crop, approaching the record harvest of 5.8 million tons set in 1986/87. Sugar from sugarbeets is expected to be up 100,000 tons to 850,000 tons and the cane crop is expected to increase 150,000 tons to 4.75 million tons. The Chinese government has announced a major price rise for the 1990/91 crop, the second major price hike in two years. Sugar officials still believe the state-set procurement and refinery prices are too low. Farmers can earn more growing other crops and prices paid by refineries are generally still below the cost of production. Sugarcane and sugarbeets compete with a wide variety of crops such as corn, soybeans, rice, fruit, vegetables and fish. Continued improvements in yields, water management, hybrid seed and the development of the sugar industry in "targeted" areas is expected to bring more significant production increases in 1990/91. In Thailand, the forecast is up 3 percent from the 1989/90 season but down 9 percent from the record high outturn in 1988/89. Insufficient and poor distribution of rainfall continues to reduce crop prospects as early season dryness is expected to delay 1990/91 planting which could lower yields. Attractive sugarcane prices have boosted planted area in the last two years to 670,000 hectares. The Thai Government is directly involved in the pricing of sugarcane as well as the pricing, marketing, and distribution of raw sugar. Its policies include a domestic price floor, packing credits for sugar exporters and a waiver of business taxes. The Government operates a credit program under which farmers can borrow at below market interest rates and is also a joint venture partner in a sugar export brokerage house. Harvesting usually starts when the cane is 8-12 months old. This is reflected in yields of less than 50 tons per hectare. In the Philippines the forecast is unchanged from last season, though planted area is expected to be 15,000 hectares more than a year ago. Abnormally dry weather has reduced yield prospects for the 1990/91 crop, although high domestic sugar prices have prompted sugar producers to expand planted area, utilize more production inputs and to improve farming practices. Despite these positive developments, sugar industry officials express concern about the potential impacts of the Comprehensive Agrarian Reform Program and some sugar planters continue to encounter problems with civil disorder, particularly in isolated areas of Negros Island. Philippine sugar production has risen sharply since bottoming-out at 1.35 million tons in 1986/87, but remains well below the 2.5 million ton outturn of the early 1980's.

In South Africa, the forecast is for a 1 percent decline in output, as yields are expected to return to near normal in spite of a slight increase in area to be harvested. In Australia, the forecast is up 2 percent as the industry continues to adjust to a series of developments which have succeeded in breaking down a tightly controlled and highly regulated sector into one which is more in tune with market forces. The sugarcane area for harvest is expected to expand by 4 percent in 1990/91.

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Table 9

WORLD CENTRIFUGAL SUGAR PRODUCTION  
1988/89 - 1990/91 1/

COUNTRY/REGION	1987/88	1988/89	1989/90 2/	1990/91 3/
	1,000 Metric Tons			
NORTH AMERICA				
Canada	129	104	110	120
Mexico	3,806	3,678	3,000	3,400
United States <u>3/</u> <u>4/</u>	6,483	6,089	6,082	6,050
SUBTOTAL	10,418	9,871	9,192	9,570
SOUTH AMERICA				
Argentina	1,177	1,284	945	1,100
Bolivia	174	163	155	155
Brazil	8,457	8,582	7,500	7,500
Chile	416	446	448	350
Colombia	1,344	1,435	1,570	1,600
Ecuador	316	315	330	310
Guyana	168	170	180	175
Paraguay	100	105	120	110
Peru	592	626	580	600
Surinam	10	10	10	10
Uruguay	65	85	75	70
Venezuela	537	513	485	490
SUBTOTAL	13,356	13,734	12,398	12,470
CENTRAL AMERICA				
Belize	83	92	90	90
Costa Rica	219	224	230	240
El Salvador	189	174	205	260
Guatemala	690	715	735	790
Honduras	173	184	200	230
Nicaragua	225	200	215	225
Panama	108	109	119	120
SUBTOTAL	1,687	1,698	1,794	1,955
CARIBBEAN				
Barbados	80	66	65	60
Cuba	7,400	8,100	7,500	7,500
Dominican Republic	777	735	750	780
Guadeloupe	87	90	61	75
Haiti	40	40	40	40
Jamaica	221	192	235	250
Martinique	1	1	1	1
Puerto Rico	92	88	75	85
St. Kitts - Nevis	32	32	32	32
Trinidad and Tobago	91	97	103	100
SUBTOTAL	8,821	9,441	8,862	8,923

Table 9 (Continued)

WORLD CENTRIFUGAL SUGAR PRODUCTION  
1988/89 - 1990/91 1/

COUNTRY/REGION	1987/88	1988/89	1989/90 <u>2/</u>	1990/91 <u>3/</u>
	1,000 Metric Tons			
EC				
Belgium-Luxembourg	1,005	1,005	1,038	1,050
Denmark	422	550	529	500
France	3,966	4,372	4,198	4,670
Germany, West	2,968	3,003	3,340	3,450
Greece	194	216	421	250
Ireland	242	212	230	220
Italy	1,869	1,609	1,880	1,700
Netherlands	1,065	1,074	1,240	1,050
Portugal	2	2	2	2
Spain	1,092	1,290	1,050	1,165
United Kingdom	1,335	1,417	1,370	1,350
SUBTOTAL	14,160	14,750	15,298	15,407
OTHER WEST EUROPE				
Austria	390	358	460	500
Finland	70	154	168	130
Sweden	264	375	401	325
Switzerland	123	150	150	150
SUBTOTAL	847	1,037	1,179	1,105
EAST EUROPE				
Albania	40	40	30	35
Bulgaria	140	100	120	120
Czechoslovakia	800	700	800	800
Germany, East	768	575	748	850
Hungary	450	475	500	500
Poland	1,823	1,825	1,865	1,720
Romania	450	425	520	560
Yugoslavia	946	660	930	900
SUBTOTAL	5,417	4,800	5,513	5,485
USSR	9,560	8,900	9,560	9,100
NORTH AFRICA				
Algeria	11	11	11	11
Egypt	907	945	960	980
Morocco	443	527	502	515
Sudan	408	360	400	400
Tunisia	25	25	25	25
SUBTOTAL	1,794	1,868	1,898	1,931

May 1990

Production Estimates and Crop Assessment Division, CMP/USDA



Table 9 (Continued)

WORLD CENTRIFUGAL SUGAR PRODUCTION  
1988/89 - 1990/91 1/

COUNTRY/REGION	1987/88	1988/89	1989/90 <u>2/</u>	1990/91 <u>3/</u>
	1,000 Metric Tons			
OTHER AFRICA				
Angola	35	35	35	35
Burkina	20	20	20	20
Burundi	3	4	8	10
Cameroon	40	35	40	40
Chad	20	20	20	20
Congo	35	35	35	35
Cote d'Ivoire	140	154	160	160
Ethiopia	190	195	200	200
Gabon	20	20	20	20
Ghana	10	10	10	10
Guinea	25	25	25	25
Kenya	413	411	441	440
Madagascar	114	120	125	125
Malawi	181	185	175	180
Mali	20	20	20	20
Mauritius	733	672	602	650
Mozambique	50	50	50	50
Nigeria	55	56	53	55
Reunion	236	262	179	235
Rwanda	4	5	5	5
Senegal	60	60	60	60
Somalia	45	45	50	50
South Africa	2,235	2,300	2,275	2,260
Swaziland	461	462	500	500
Tanzania	108	101	108	105
Uganda	10	10	30	30
Zaire	60	60	60	60
Zambia	130	150	140	140
Zimbabwe	453	459	510	450
SUBTOTAL	5,906	5,981	5,956	5,990
MIDDLE EAST				
Iran	450	450	450	450
Iraq	12	10	10	10
Lebanon	6	6	6	6
Syria	40	30	41	40
Turkey	1,780	1,410	1,400	1,350
SUBTOTAL	2,288	1,906	1,907	1,856

May 1990

Production Estimates and Crop Assessment Division, CMP/USDA

Table 9 (Continued)

WORLD CENTRIFUGAL SUGAR PRODUCTION  
1988/89 - 1990/91 1/

COUNTRY/REGION	1987/88	1988/89	1989/90 <u>2/</u>	1990/91 <u>3/</u>
1,000 Metric Tons				
OTHER ASIA				
Afghanistan	10	10	10	10
Bangladesh	190	117	170	180
Burma	50	50	50	50
China	4,706	5,312	5,350	5,600
India <u>6/</u>	10,000	10,150	11,200	11,500
Indonesia	2,127	1,889	2,080	2,100
Japan	929	984	975	970
Malaysia	88	100	110	115
Nepal	17	17	17	17
Pakistan	1,907	1,980	2,015	2,135
Philippines	1,400	1,600	1,700	1,700
Sri Lanka	34	35	35	35
Taiwan	627	664	600	580
Thailand	2,704	4,055	3,600	3,700
Vietnam	350	400	450	450
SUBTOTAL	25,139	27,363	28,362	29,142
OCEANIA				
Australia	3,528	3,680	3,790	3,850
Fiji	401	363	461	450
Papua New Guinea	25	30	30	30
SUBTOTAL	3,954	4,073	4,281	4,330
WORLD TOTAL	103,347	105,422	106,200	107,264

1/ Crop years are on a September/August basis, but include outturn of sugar from several Southern Hemisphere countries which begin prior to September. Conversion factors used include 1.087 for refined beet sugar 1.07 for refined cane sugar.

2/ Preliminary.

3/ Forecast.

4/ United States data include continental beet and cane and Hawaii cane, but exclude Puerto Rico cane which is listed separately.

5/ French data exclude production of cane sugar in Guadeloupe, Martinique, and Reunion which are listed separately.

6/ Indian data include production of Khandsari sugar, a native type, semi-white centrifugal sugar. Estimated output of Khandsari sugar in thousand tons is as follows: 1987/88 - 320; 1988/89 - 720; 1989/90 - 530; and 1990/91 - 700



Table 10

SUGARCANE AREA HARVESTED, YIELD AND PRODUCTION  
BY  
SELECTED SUGARCANE PRODUCING COUNTRIES 1/

COUNTRY/YEAR	SUGAR AREA HARVEST	SUGAR CANE YIELD	CANE PRODUCTION	RAW SUGAR	RECOVERY RATE	SUGAR YIELD
	1,000 HA	MT/HA	-----1,000 MT-----		PERCENT	MT/HA
Argentina 2/						
1988/89	277	44.2	12,245	1,284	10.5	4.64
1989/90	229	46.3	10,605	945	8.9	4.13
1990/91 MAY	255	50.2	12,810	1,100	8.6	4.31
Australia						
1988/89	314	89.4	28,073	3,680	13.1	11.72
1989/90	327	89.2	29,170	3,790	13.0	11.59
1990/91 MAY	340	86.8	29,500	3,850	13.1	11.32
Brazil						
1988/89	1,400	62.9	88,000	8,582	9.8	6.13
1989/90	1,210	60.3	73,000	7,500	10.3	6.20
1990/91 MAY	1,210	62.0	75,000	7,500	10.0	6.20
China 2/						
1988/89	924	53.1	49,060	4,140	8.4	4.48
1989/90	973	51.4	50,000	4,600	9.2	4.73
1990/91 MAY	1,000	55.0	55,000	4,750	8.6	4.75
Colombia						
1988/89	108	122.0	13,176	1,435	10.9	13.29
1989/90	110	126.7	13,940	1,570	11.3	14.27
1990/91 MAY	115	127.8	14,700	1,600	10.9	13.91
Cuba						
1988/89	1,350	54.9	74,100	8,100	10.9	6.00
1989/90	1,350	50.0	67,500	7,500	11.1	5.56
1990/91 MAY	1,350	50.0	67,500	7,500	11.1	5.56
Dominican Republic						
1988/89	215	32.2	6,933	735	10.6	3.42
1989/90	219	33.1	7,240	750	10.4	3.42
1990/91 MAY	220	36.4	8,000	780	9.8	3.55
Egypt 2/						
1988/89	92	90.2	8,300	874	10.5	9.50
1989/90	93	94.6	8,800	885	10.1	9.52
1990/91 MAY	95	94.7	9,000	900	10.0	9.47

May 1990

Production Estimates and Crop Assessment Division

Table 10 (Continued)

SUGARCANE AREA HARVESTED, YIELD AND PRODUCTION  
BY  
SELECTED SUGARCANE PRODUCING COUNTRIES 1/

COUNTRY/YEAR	SUGAR AREA HARVEST	SUGAR CANE YIELD	CANE PRODUCTION	RAW SUGAR	RECOVERY RATE	SUGAR YIELD
	1,000 HA	MT/HA	-----1,000 MT-----		PERCENT	MT/HA
Fiji						
1988/89	60	53.1	3,185	363	11.4	6.05
1989/90	60	76.8	4,606	461	10.0	7.68
1990/91 MAY	60	66.7	4,000	450	11.3	7.50
Guatemala						
1988/89	98	70.5	6,910	715	10.3	7.30
1989/90	100	70.8	7,076	735	10.4	7.35
1990/91 MAY	105	71.9	7,550	790	10.5	7.52
India 3/4/						
1988/89	1,650	60.3	99,500	10,150	10.2	6.15
1989/90	1,880	61.2	115,000	11,200	9.7	5.96
1990/91 MAY	1,900	60.5	115,000	11,500	10.0	6.05
Indonesia						
1988/89	322	76.8	24,742	1,889	7.6	5.87
1989/90	340	78.5	26,700	2,080	7.8	6.12
1990/91 MAY	330	81.2	26,800	2,100	7.8	6.36
Mauritius						
1988/89	80	75.0	6,000	672	11.2	8.40
1989/90	80	75.0	6,000	602	10.0	7.53
1990/91 MAY	80	75.0	6,000	650	10.8	8.13
Mexico						
1988/89	542	66.2	35,900	3,678	10.2	6.79
1989/90	510	60.8	31,000	3,000	9.7	5.88
1990/91 MAY	520	67.3	35,000	3,400	9.7	6.54
Pakistan 2/						
1988/89	515	42.2	21,708	1,945	9.0	3.78
1989/90	496	42.1	20,900	1,980	9.5	3.99
1990/91 MAY	530	42.1	22,300	2,100	9.4	3.96
May 1990	Production Estimates and Crop Assessment Division					



Table 10 (Continued)

SUGARCANE AREA HARVESTED, YIELD AND PRODUCTION  
BY  
SELECTED SUGARCANE PRODUCING COUNTRIES 1/

COUNTRY/YEAR	SUGAR AREA HARVEST	SUGAR CANE YIELD	CANE PRODUCTION	RAW SUGAR	RECOVERY RATE	SUGAR YIELD
	1,000 HA	MT/HA	-----1,000 MT-----		PERCENT	MT/HA
Peru						
1988/89	47	134.7	6,333	626	9.9	13.32
1989/90	45	133.3	6,000	580	9.7	12.89
1990/91 MAY	46	134.8	6,200	600	9.7	13.04
Philippines						
1988/89	295	64.4	19,000	1,600	8.4	5.42
1989/90	315	62.2	19,600	1,700	8.7	5.40
1990/91 MAY	325	60.3	19,600	1,700	8.7	5.23
South Africa						
1988/89	280	70.9	19,859	2,300	11.6	8.21
1989/90	272	68.8	18,717	2,275	12.2	8.36
1990/91 MAY	274	69.3	19,000	2,260	11.9	8.25
Sudan						
1988/89	40	112.5	4,500	360	8.0	9.00
1989/90	40	112.5	4,500	400	8.9	10.00
1990/91 MAY	40	112.5	4,500	400	8.9	10.00
Swaziland						
1988/89	36	149.2	5,372	462	8.6	12.83
1989/90	37	159.0	5,882	500	8.5	13.51
1990/91 MAY	37	162.2	6,000	500	8.3	13.51
Taiwan						
1988/89	63	99.6	6,276	664	10.6	10.54
1989/90	61	98.4	6,000	600	10.0	9.84
1990/91 MAY	61	98.4	6,000	580	9.7	9.51
Thailand						
1988/89	659	55.6	36,667	4,055	11.1	6.15
1989/90	660	53.0	35,000	3,600	10.3	5.45
1990/91 MAY	660	53.0	35,000	3,700	10.6	5.61
U.S.(Hawaii) 5/						
1988/89	32	215.6	6,900	767	11.1	23.97
1989/90	30	211.7	6,350	810	12.8	27.00
1990/91 MAY	30	216.0	6,480	800	12.3	26.67

May 1990

Production Estimates and Crop Assessment Division

Table 10 (Continued)

SUGARCANE AREA HARVESTED, YIELD AND PRODUCTION  
BY  
SELECTED SUGARCANE PRODUCING COUNTRIES 1/

COUNTRY/YEAR	SUGAR AREA HARVEST	SUGAR CANE YIELD	CANE PRODUCTION	RAW SUGAR	RECOVERY RATE	SUGAR YIELD
	1,000 HA	MT/HA	-----1,000 MT-----		PERCENT	MT/HA
U.S.(Mainland) 2/						
1988/89	289	65.5	18,936	2,241	11.8	7.75
1989/90	298	64.5	19,227	2,062	10.7	6.92
1990/91 MAY	238	67.4	16,050	1,800	11.2	7.56
Venezuela						
1988/89	112	70.1	7,850	513	6.5	4.58
1989/90	100	70.0	7,000	485	6.9	4.85
1990/91 MAY	100	71.0	7,100	490	6.9	4.90
Zimbabwe						
1988/89	32	110.8	3,544	459	13.0	14.34
1989/90	34	113.9	3,871	510	13.2	15.00
1990/91 MAY	30	120.0	3,600	450	12.5	15.00
MAJOR CANE PRODUCERS						
1988/89	9,832	62.4	613,069	62,289	10.2	6.34
1989/90	9,869	61.2	603,684	61,120	10.1	6.19
1990/91 MAY	9,951	62.1	617,690	62,250	10.1	6.26
OTHERS						
1988/89	1,172	59.3	69,445	5,959	8.6	5.08
1989/90	1,207	59.6	71,966	6,191	8.6	5.13
1990/91	1,215	60.5	73,522	6,352	8.6	5.23
WORLD						
1988/89	11,004	62.0	682,514	68,248	10.0	6.20
1989/90	11,076	61.0	675,650	67,311	10.0	6.08
1990/91 MAY	11,166	61.9	691,212	68,602	9.9	6.14

May 1990

Production Estimates and Crop Assessment Division

1/ Refined cane sugar is converted to raw value by a factor of 1.07.

2/ Produces beet sugar as well as cane sugar. 3/ Includes khandsari (native type semi-white centrifugal sugar.) 4/ Cane area and production data include cane used for non-centrifugal sugar, which distorts the recovery rate and the sugar yield per hectare. 5/ Hawaiian cane is harvested once every 24 months, consequently yields per hectare are much higher than in countries where cane is harvested every year.



Table 11

SUGARBEET AREA HARVESTED, YIELD AND PRODUCTION BY  
SELECTED SUGARBEET PRODUCING COUNTRIES 1/

COUNTRY/YEAR	SUGAR AREA HARVEST	SUGAR BEET YIELD	BEET PRODUCTION	RAW SUGAR	RECOVERY RATE	SUGAR YIELD
	1,000 HA	MT/HA	-----1,000 MT-----		PERCENT	MT/HA
Austria						
1988/89	38	50.9	1,934	358	18.5	9.42
1989/90	47	56.2	2,641	460	17.4	9.79
1990/91 MAY	50	55.2	2,760	500	18.1	10.00
Belgium Luxembourg						
1988/89	115	56.0	6,443	1,005	15.6	8.74
1989/90	112	59.3	6,639	1,038	15.6	9.27
1990/91 MAY	117	57.7	6,750	1,050	15.6	8.97
China 2/						
1988/89	745	17.2	12,810	1,172	9.1	1.57
1989/90	533	17.6	9,360	750	8.0	1.41
1990/91 MAY	575	17.4	10,000	850	8.5	1.48
Czechoslovakia						
1988/89	208	36.1	7,500	700	9.3	3.37
1989/90	208	36.1	7,500	800	10.7	3.85
1990/91 MAY	208	36.1	7,500	800	10.7	3.85
Denmark						
1988/89	68	49.7	3,379	550	16.3	8.09
1989/90	67	49.3	3,302	529	16.0	7.90
1990/91 MAY	67	44.8	3,000	500	16.7	7.46
France						
1988/89	430	59.1	25,429	4,372	17.2	10.17
1989/90	431	57.4	24,718	4,198	17.0	9.74
1990/91 MAY	470	57.4	27,000	4,670	17.3	9.94
Germany, East						
1988/89	198	23.4	4,625	575	12.4	2.90
1989/90	217	28.3	6,134	748	12.2	3.45
1990/91 MAY	200	35.0	7,000	850	12.1	4.25
Germany, West						
1988/89	386	48.2	18,590	3,003	16.2	7.78
1989/90	392	53.0	20,767	3,340	16.1	8.52
1990/91 MAY	417	52.3	21,800	3,450	15.8	8.27

May 1990

Production Estimates and Crop Assessment Division, CMP/USDA

Table 11 (Continued)

SUGARBEET AREA HARVESTED, YIELD AND PRODUCTION BY  
SELECTED SUGARBEET PRODUCING COUNTRIES 1/

COUNTRY/YEAR	SUGAR AREA HARVEST	SUGAR BEET YIELD	BEET PRODUCTION	RAW SUGAR	RECOVERY RATE	SUGAR YIELD
	1,000 HA	MT/HA	-----1,000 MT-----		PERCENT	MT/HA
Hungary						
1988/89	105	40.0	4,200	475	11.3	4.52
1989/90	115	38.3	4,400	500	11.4	4.35
1990/91 MAY	115	38.3	4,400	500	11.4	4.35
Italy						
1988/89	266	49.3	13,105	1,609	12.3	6.05
1989/90	290	57.2	16,600	1,880	11.3	6.48
1990/91 MAY	260	53.8	14,000	1,700	12.1	6.54
Japan 2/						
1988/89	72	48.5	3,489	705	20.2	9.79
1989/90	72	50.8	3,660	665	18.2	9.24
1990/91 MAY	72	53.5	3,850	680	17.7	9.44
Netherlands						
1988/89	123	54.3	6,676	1,074	16.1	8.73
1989/90	124	61.9	7,679	1,240	16.1	10.00
1990/91 MAY	125	53.0	6,625	1,050	15.8	8.40
Poland						
1988/89	412	34.1	14,069	1,825	13.0	4.43
1989/90	423	34.0	14,400	1,865	13.0	4.41
1990/91 MAY	390	33.3	13,000	1,720	13.2	4.41
Romania						
1988/89	245	25.3	6,200	425	6.9	1.73
1989/90	219	26.9	5,900	520	8.8	2.37
1990/91 MAY	195	28.7	5,600	560	10.0	2.87
Spain 2/						
1988/89	175	51.9	9,084	1,275	14.0	7.29
1989/90	156	47.8	7,460	1,035	13.9	6.63
1990/91 MAY	165	52.1	8,600	1,150	13.4	6.97
Turkey						
1988/89	315	36.6	11,530	1,410	12.2	4.48
1989/90	338	32.3	10,930	1,400	12.8	4.14
1990/91 MAY	330	32.1	10,600	1,350	12.7	4.09
U.S.S.R.						
1988/89	3,370	26.1	87,855	8,900	10.1	2.64
1989/90	3,323	29.3	97,500	9,560	9.8	2.88
1990/91 MAY	3,300	27.3	90,000	9,100	10.1	2.76

May 1990

Production Estimates and Crop Assessment Division, CMP/USDA



Table 11 (Continued)

SUGARBEET AREA HARVESTED, YIELD AND PRODUCTION BY  
SELECTED SUGARBEET PRODUCING COUNTRIES 1/

COUNTRY/YEAR	SUGAR AREA HARVEST	SUGAR BEET YIELD	BEET PRODUCTION	RAW SUGAR	RECOVERY RATE	SUGAR YIELD
	1,000 HA	MT/HA	-----1,000 MT-----		PERCENT	MT/HA
United Kingdom						
1988/89	198	41.2	8,152	1,417	17.4	7.16
1989/90	194	41.2	8,000	1,370	17.1	7.06
1990/91 MAY	198	40.4	8,000	1,350	16.9	6.82
United States <sup>2/</sup>						
1988/89	526	42.8	22,507	3,081	13.7	5.86
1989/90	528	43.9	23,182	3,210	13.8	6.08
1990/91 MAY	554	44.9	24,850	3,450	13.9	6.23
Yugoslavia						
1988/89	127	35.9	4,558	660	14.5	5.20
1989/90	142	46.9	6,665	930	14.0	6.55
1990/91 MAY	155	40.3	6,250	900	14.4	5.81
MAJOR BEET PRODUCERS						
1988/89	8,122	33.5	272,135	34,591	12.7	4.26
1989/90	7,931	36.2	287,437	36,038	12.5	4.54
1990/91 MAY	7,963	35.4	281,585	36,180	12.8	4.54
OTHERS						
1988/89	538	38.8	20,894	2,583	12.4	4.80
1989/90	558	38.1	21,285	2,851	13.4	5.11
1990/91 MAY	555	36.9	20,465	2,482	12.1	4.47
WORLD						
1988/89	8,660	33.8	293,029	37,174	12.7	4.29
1989/90	8,489	36.4	308,722	38,889	12.6	4.58
1990/91 MAY	8,518	35.5	302,050	38,662	12.8	4.54

1/ Refined beet sugar is converted to raw value by a forecast of 1.087.

2/ Produces cane sugar as well as beet sugar.

## DAIRY PRODUCTION FORECASTS FOR SELECTED COUNTRIES

Revised forecasts for 16 selected countries, accounting for about three-quarters of world dairy production, indicate prospects for 1990 have improved slightly since November. Forecasts made in November 1989 indicated 1990 milk production in these 16 countries would total 322 million tons, while current forecasts indicate production of 324 million tons. Most of the increased milk production is forecast to occur in the USSR. For the 16 countries reviewed, current forecasts of processed dairy product output are also up slightly from November forecasts.

U.S. 1990 milk production is forecast at 66.9 million tons, up 2 percent from 1989 but 1 percent below the November forecast. Actual production in 1989 was somewhat lower than expected in November. Mexico's 1990 milk output is now forecast at 9.7 million tons, 8 percent above 1989 and 2 percent above the November forecast. A major policy change in late January ensures that producers will receive higher prices. Continued imports of dairy cattle, mostly from the United States, have facilitated a 200,000-head increase in the milk cow herd.

Forecast milk production in 6 selected EC countries reviewed is up slightly from last year but is down from the November forecast. French milk production is forecast at 25.8 million tons, one percent below the November forecast but the same as last year's revised production level. Output in Germany is forecast at 23.9 million tons, unchanged from November and over 300,000 tons below 1989. Milk output in Italy is forecast at 10.6 million tons, the same as in 1989 but slightly below the November forecast. Italy's delivery quota for 1990/91 (April/March) has been cut and producers have started to adjust downward. Following a year of good prices and with an upward adjustment in the quota, Ireland's milk output is forecast to increase about 2 percent in 1990. Also with enlarged quotas, milk output in the Netherlands and the UK is forecast to increase about 1 percent in 1990. This would be the first increase in either of these two countries since inception of the quota system.

Final 1989 production for the USSR was well above the November estimate as growth of the milking herd during 1989 was greater than expected. Annual growth forecast for 1990 is 1 percent. Though small, that growth compares to a small decline forecast in November. Japan's 1989 milk production also was much stronger than forecast in November. Per cow yields were up sharply, reflecting continued genetic improvement in Japan's dairy herd. A favorable growing season for pastures and favorable prices have pushed forecast Australian milk production up one percent from the year earlier level. New Zealand's 1989/90 milk production is expected to total 7.9 million tons, up 6 percent from 1988/89 but unchanged from the November forecast.



The mix of dairy product output in 1990 will be influenced by relative prices throughout the year. At the start of the year, prices have generally favored cheese production. Thus cheese output in the 16 countries reviewed is now forecast as 8.8 million tons, 4 percent above 1989 and slightly above the November forecast. Compared to the November forecast, Italy and West Germany were each up about 5 percent while the United States had the biggest decline, 40,000 tons. Butter production for 1990 in the 16 countries reviewed is now forecast at 4.6 million tons, essentially unchanged from both 1989 and the November forecast. An increase from 1989 for the USSR almost offset the downturn in the United States. Changes from the November forecast include upward adjustments for Ireland and Australia and a downward adjustment in Japan. Output of non-fat dry milk in the selected countries is now forecast at 2.7 million tons, nearly unchanged from 1989 but up 32,000 tons from the November release. Compared with November, the forecast was increased for Ireland, West Germany, the USSR, and Japan while the U.S. forecast was reduced by 70,000 tons.

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Table 12

MILK COW NUMBERS IN SELECTED COUNTRIES 1/  
(In 1,000 head)

	<u>1986</u>	1987	<u>1988</u>	<u>1989</u> 2/	Forecast 1990 3/ <u>Nov.</u>	<u>May</u>
SELECTED COUNTRIES						
Canada	1,547	1,481	1,467	1,449	1,440	1,429
Mexico	5,890	6,300	6,200	6,300	6,500	6,520
United States	10,773	10,327	10,262	10,127	10,040	10,090
Denmark	864	811	774	763	750	755
France	6,506	6,359	5,841	5,820	5,830	5,815
Germany, F.R.	5,437	5,277	5,059	4,950	4,900	4,900
Ireland	1,528	1,490	1,444	1,387	1,320	1,400
Italy	3,021	3,021	3,020	2,973	3,018	2,970
Netherlands	2,247	2,043	1,946	1,886	1,900	1,900
United Kingdom	3,293	3,311	3,166	3,142	3,200	3,224
Czechoslovakia	1,817	1,791	1,788	1,785	1,780	1,780
USSR	42,900	42,400	42,000	41,800	40,500	41,700
Japan	1,099	1,052	1,046	1,065	1,060	1,060
China (Mainland)	1,460	1,846	2,164	2,222	2,150	2,260
Australia 4/	1,770	1,707	1,697	1,683	1,683	1,683
New Zealand 5/	2,221	2,252	2,280	2,236	2,228	2,228
SUBTOTAL	92,373	91,468	90,154	89,588	88,299	89,714
OTHER	69,335	69,362	68,769	69,186	69,908	69,908
WORLD	161,708	160,830	158,923	158,774	158,207	159,622

1/ This is the semiannual update of the production series regularly published in the World Agricultural Production and World Dairy Situation circulars.

World totals compare to those in the above mentioned circulars.

2/ Preliminary. 3/ Forecast. 4/ Year beginning July 1.

5/ Year beginning June 1.

May 1990

Production Estimates and Crop Assessment Division, FAS, USDA



Table 13

COW MILK PRODUCTION IN SELECTED COUNTRIES 1/  
(In 1,000 metric tons)

SELECTED COUNTRIES	1986	1987	1988	1989 2/	Forecast 1990 3/	
					<u>NOV.</u>	<u>MAY</u>
Canada	7,925	7,986	8,229	7,980	8,260	7,900
Mexico	8,000	8,971	8,830	8,970	9,500	9,718
United States	65,037	64,732	65,840	65,432	67,450	66,850
Denmark	5,111	4,860	4,739	4,747	4,720	4,720
France	28,074	27,146	26,000	25,800	26,000	25,800
Germany, F.R.	26,350	24,436	23,974	24,242	23,900	23,900
Ireland	5,816	5,751	5,573	5,500	5,635	5,600
Italy	10,278	10,300	10,671	10,600	10,720	10,600
Netherlands	12,695	11,672	11,406	11,301	11,400	11,420
United Kingdom	16,218	15,360	14,880	14,666	15,000	14,750
Czechoslovakia	7,015	6,921	6,963	7,100	6,900	7,100
USSR	102,173	103,400	106,800	108,100	106,500	108,600
Japan	7,457	7,335	7,607	8,060	7,740	8,000
China (Mainland)	2,860	3,301	3,660	4,000	3,500	4,300
Australia 4/	6,205	6,367	6,297	6,465	6,475	6,557
New Zealand 5/	8,226	7,245	7,936	7,482	7,938	7,938
SUBTOTAL	319,440	315,783	319,405	320,445	321,638	323,753
OTHER	107,559	111,254	110,862	113,057	116,253	116,253
WORLD	426,999	427,037	430,267	433,502	437,891	440,006

1/ This is the semiannual update of the production series regularly published in the World Agricultural Production and World Dairy Situation circulars.

World totals compare to those in the above mentioned circulars.

2/ Preliminary. 3/ Forecast. 4/ Year beginning July 1.

5/ Year beginning June 1.

May 1990

Production Estimates and Crop Assessment Division, FAS, USDA

Table 14

BUTTER PRODUCTION IN SELECTED COUNTRIES 1/  
(In 1,000 metric tons)

	1986	1987	1988	1989 2/	Forecast 1990 3/ NOV.	MAY
SELECTED COUNTRIES						
Canada	109	95	105	99	106	97
Mexico	21	26	32	33	33	34
United States	545	501	547	572	550	535
Denmark	112	96	94	92	91	90
France	633	569	521	524	530	525
Germany, F.R.	567	464	390	398	390	390
Ireland	160	150	139	142	124	138
Italy	70	70	71	70	65	68
Netherlands	377	234	214	208	221	215
UK	222	174	140	132	130	135
Czechoslovakia	156	149	148	155	148	155
USSR	1,700	1,742	1,724	1,716	1,750	1,750
Japan	88	69	68	78	85	78
Australia 4/	105	104	98	101	94	102
New Zealand 5/	299	248	276	248	260	260
SUBTOTAL	5,164	4,691	4,567	4,568	4,577	4,572
OTHER	1,938	1,928	1,997	2,046	2,098	2,098
WORLD	7,102	6,619	6,564	6,614	6,675	6,670

1/ This is the semiannual update of the production series regularly published in the World Agricultural Production and World Dairy Situation circulars. World totals compare to those in the above mentioned circulars.

2/ Preliminary. 3/ Forecast. 4/ Year beginning July 1.

5/ Year beginning June 1.

May 1990

Production Estimates and Crop Assessment Division, FAS, USDA



Table 15

CHEESE PRODUCTION IN SELECTED COUNTRIES 1/  
(In 1,000 metric tons)

	1986	1987	1988	1989 2/	Forecast 1990 3/ <u>NOV.</u>	<u>MAY</u>
SELECTED COUNTRIES						
Canada	226	246	252	247	270	245
Mexico	262	298	370	373	391	395
United States	2,363	2,424	2,527	2,531	2,740	2,725
Denmark	252	271	258	275	270	290
France	1,320	1,342	1,378	1,430	1,470	1,460
Germany, F.R.	530	553	585	610	605	628
Ireland	63	65	75	73	78	80
Italy	694	704	737	735	700	735
Netherlands	534	552	559	565	563	570
United Kingdom	256	263	299	285	305	295
Czechoslovakia	134	142	146	149	140	149
USSR	844	861	894	910	920	925
Japan	24	25	26	27	27	27
Australia 4/	170	177	176	190	190	187
New Zealand 5/	127	113	128	124	130	130
SUBTOTAL	7,799	8,036	8,410	8,524	8,799	8,841
OTHER	1,965	2,029	2,079	2,083	2,147	2,147
WORLD	9,764	10,065	10,489	10,607	10,946	10,988

1/ This is the semiannual update of the production series regularly published in the World Agricultural Production and World Dairy Situation circulars.

World totals compare to those in the above mentioned circulars.

2/ Preliminary. 3/ Forecast. 4/ Year beginning July 1.

5/ Year beginning June 1.

May 1990

Production Estimates and Crop Assessment Division, FAS, USDA

Table 16

NONFAT DRY MIIK PRODUCTION IN SELECTED COUNTRIES 1/  
(In 1,000 metric tons)

	1986	1987	1988	1989 2/	Forecast 1990 3/ NOV.	MAY
SELECTED PRODUCERS						
Canada	109	110	110	93	105	95
Mexico	3	4	5	6	7	10
United States	582	480	444	395	400	330
Denmark	31	18	7	13	10	18
France	712	603	490	520	540	540
Germany, F.R.	647	474	398	450	400	430
Ireland	156	129	100	147	120	152
Italy	2	0	1	0	0	0
Netherlands	172	98	87	83	95	85
United Kingdom	267	193	136	129	130	132
USSR	280	310	350	380	380	400
Japan	184	153	159	178	160	180
Australia 4/	124	128	120	119	120	127
New Zealand 5/	215	173	198	181	180	180
SUBTOTAL	3,484	2,873	2,605	2,694	2,647	2,679
OTHER	702	628	623	673	692	692
WORLD	4,186	3,501	3,228	3,367	3,339	3,371

1/ This is the semiannual update of the production series regularly published in the World Agricultural Production and World Dairy Situation circulars. World totals compare to those in the above mentioned circulars.

2/ Preliminary. 3/ Forecast. 4/ Year beginning July 1.

4/ Year beginning June 1.

May 1990

Production Estimates and Crop Assessment Division, FAS, USDA



Table 17

CASEIN PRODUCTION IN SELECTED COUNTRIES 1/  
(In 1,000 metric tons)

	1986	1987	1988	1989 2/	Forecast 1990 3/ NOV.	MAY
SELECTED COUNTRIES						
France	44	52	61	47	50	50
Germany, F.R.	20	25	25	21	23	20
Ireland	31	39	44	36	30	30
Italy	1	0	0	0	0	0
Netherlands	20	20	20	20	15	20
UK	2	1	0	1	1	0
Australia 4/	7	8	9	7	7	7
New Zealand 5/	75	62	66	56	62	62
SUBTOTAL	200	207	225	188	188	189
OTHER	25	22	24	28	30	30
WORLD	225	229	249	216	218	219

1/ This is the semiannual update of the production series regularly published in the World Agricultural Production and World Dairy Situation circulars.

World totals compare to those in the above mentioned circulars.

2/ Preliminary. 3/ Forecast. 4/ Year beginning July 1.

5/ Year beginning June 1.

May 1990

Production Estimates and Crop Assessment Division, FAS, USDA

## WORLD PRODUCTION OF DRIED PRUNES

World production of dried prunes for the 1989/90 season is currently forecast at 259,345 tons, 21 percent above last season's weather-reduced pack. The Northern Hemisphere pack has been revised upward to 232,045 tons due to a 5-percent increase in the U.S. pack estimate.

Record packs in Chile and South Africa are expected to boost dried prune production in the Southern Hemisphere to an all-time high of 27,300 tons, a 14-percent increase over last year. The 13,000-ton pack forecast for Chile reflects excellent growing conditions, an increase in the number of bearing plum trees, and lucrative prices for growers. Although preliminary assessments indicate the 1989/90 dried prune pack in South Africa will reach a record 3,300 tons, the bulk of the pack reportedly consists of medium-sized fruits for which there is only limited domestic demand. Growers are being urged to properly thin maturing crops to ensure ample production of large-sized fruit. Argentina's 1989/90 dried prune pack is expected to surpass last year's volume by 7 percent. Early season prospects for a larger pack were dampened by frosts and subsequent rains in Mendoza, the leading plum producing province. Reportedly, the quality of the pack is good but sizes are below average. Dried prune production in Australia is currently forecast at 3,000 tons, down 14 percent from last season, primarily due to extensive fruit droppage caused by wind damage just prior to harvesting. Strong demand in Asia for fresh D'agen sugar plums--the main variety used for drying--further limited supplies available for drying.

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### PRODUCTION OF DRIED PRUNES (Metric Tons - Packed Weight Basis)

	<u>1987/88</u>	<u>1988/89</u>	<u>1989/90</u> <u>1/</u>
<u>NORTHERN HEMISPHERE</u>			
France <u>2/</u>	30,380	41,000	23,000
Yugoslavia <u>2/</u>	12,387	12,873	14,000
United States <u>3/</u>	207,745	136,985	195,045
Total	250,512	190,858	232,045
<u>SOUTHERN HEMISPHERE</u>			
Argentina	11,000	7,500	8,000
Australia	1,749	3,500	3,000
Chile	11,000	10,000	13,000
South Africa	2,752	2,901	3,300
Total	26,501	23,901	27,300
WORLD TOTAL	277,013	214,759	259,345

1/ Preliminary

2/ Estimate as of November 1989

3/ Revised January 1990

May 1990      Production Estimates and Crop Assessment Division, FAS, USDA



DRIED PRUNES: PRODUCTION IN SELECTED COUNTRIES  
(Metric Tons - Packed Weight Basis)

YEAR	ARGENTINA	AUSTRALIA	CHILE	FRANCE	SOUTH AFRICA	YUGOSLAVIA	UNITED STATES	TOTAL
1970/71	5,700	4,620	4,800	14,000	1,746	26,222	181,437	238,525
1971/72	3,500	2,873	4,200	16,000	1,836	16,720	118,841	163,970
1972/73	725	3,201	3,600	12,500	860	26,614	69,853	117,353
1973/74	5,000	2,724	4,100	21,000	1,620	7,592	185,973	228,009
1974/75	4,540	2,762	4,200	22,000	2,095	15,625	128,820	180,042
1975/76	10,000	3,240	4,400	470	1,816	21,150	135,170	176,246
1976/77	10,000	3,192	5,200	26,170	1,374	6,327	134,263	186,526
1977/78	9,500	2,307	5,200	6,133	2,081	22,896	144,242	192,359
1978/79	10,000	4,200	5,400	22,190	1,583	14,350	119,748	177,471
1979/80	9,000	2,400	4,500	24,308	1,675	10,798	123,377	176,058
1980/81	7,500	2,991	4,000	17,750	1,320	18,684	152,407	204,652
1981/82	9,000	1,042	3,800	28,660	1,514	18,802	144,696	207,514
1982/83	6,000	3,683	4,000	35,600	2,024	31,000	114,310	196,617
1983/84	6,500	2,703	4,500	25,184	2,085	29,107	131,540	201,619
1984/85	8,000	3,547	5,500	38,941	1,652	20,000	134,260	211,900
1985/86	9,000	3,813	9,300	25,742	2,351	18,700	127,910	196,816
1986/87	6,000	4,472	8,700	35,978	2,121	11,870	89,810	158,951
1987/88	11,000	1,749	11,000	30,380	2,752	12,387	207,745	277,013
1988/89	7,500	3,500	10,000	41,000	2,901	12,873	136,985	214,759
1989/90 <sup>1/</sup>	8,000	3,000	13,000	23,000	3,300	14,000	195,045	259,345

<sup>1/</sup> Preliminary.

NOTE: U.S. data reported in sweatbox tons

May 1990

Foreign Production Estimates Division, FAS, USDA

# WORLD PRODUCTION OF RAISINS AND SULTANAS

The world commercial pack of raisins and sultanas for the 1989/90 season is currently forecast at a record 706,500 tons (packed weight basis), 6 percent above the previous high a year ago. The preliminary Northern Hemisphere estimate of 548,115 tons has been revised upward--to 583,850 tons--due to larger than anticipated packs in Greece and the United States.

Early assessments of the 1989/90 pack in the Southern Hemisphere indicate ample output of 122,650 tons, 9 percent greater than the 1988/89 volume. The largest increase of the season is anticipated in South Africa, where sultana production is expected to rebound to a more normal level of 30,650 tons--a gain of 49 percent over last year. Raisin production in Chile has been trending upward for the past 10 years in line with the continuing expansion in fresh grape area and production. The 1989/90 pack is forecast at a record 26,000 tons, up 6 percent from last season. For the past several years, the raisin industry in Argentina has also enjoyed an abundant supply of fresh grapes, as declining consumer demand for wine has freed up increasingly larger supplies of grapes for raisin production. The 1989/90 pack is currently projected at 8,000 tons, an increase of 14 percent over the 1988/89 volume. The one bleak spot in the Southern Hemisphere is Australia, where sultana and raisin production is expected to decline for the second consecutive year. The 1989/90 pack is forecast at 58,000 tons, down 3 percent from last season, due to heat stress.

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## WORLD PRODUCTION OF RAISINS/SULTANAS (Metric Tons - Packed Weight Basis)

	<u>1987/88</u>	<u>1988/89</u>	<u>1989/90</u> 1/
<u>NORTHERN HEMISPHERE</u>			
Greece 2/	40,000	77,800	83,600
Mexico 3/	11,250	11,000	7,000
Turkey	110,000	150,000	130,000
United States	303,947	315,862	363,250
Total	465,197	554,662	583,850
<u>SOUTHERN HEMISPHERE</u>			
Argentina	6,600	7,000	8,000
Australia	74,029	60,000	58,000
Chile	16,500	24,500	26,000
South Africa	27,448	20,639	30,650
Total	124,577	112,139	122,650
WORLD TOTAL	589,774	666,801	706,500

1/ Preliminary

2/ Revised May 1990

3/ Forecast as of November 1989

NOTE: U.S. data reported on packed weight basis. Data for Afghanistan and Iran not available.

May 1990 Production Estimates and Crop Assessment Division, FAS, USDA



Table 19

**RAISINS/SULTANAS: PRODUCTION IN SELECTED COUNTRIES**  
(Metric Tons - Packed Weight Basis)

YEAR	ARGENTINA	AUSTRALIA	CHILE	GREECE	MEXICO	SOUTH AFRICA	TURKEY	UNITED STATES	TOTAL
1970/71	3,750	50,241	700	82,090	N/A	12,232	132,000	163,212	444,225
1971/72	2,600	99,925	720	87,407	N/A	12,614	100,000	164,376	467,642
1972/73	2,570	49,766	600	71,500	N/A	14,855	106,000	88,883	334,174
1973/74	3,300	53,282	650	57,800	N/A	5,351	85,000	185,357	390,740
1974/75	4,120	59,991	630	109,000	N/A	9,549	85,000	202,086	470,376
1975/76	6,000	68,862	1,100	87,000	N/A	6,503	110,000	231,593	511,058
1976/77	6,000	56,821	1,400	81,000	N/A	8,949	80,000	176,337	410,507
1977/78	4,000	65,022	1,500	61,500	N/A	12,881	110,000	205,479	460,382
1978/79	5,500	55,894	2,000	81,000	N/A	17,530	82,000	143,418	387,342
1979/80	5,000	92,162	2,000	78,700	N/A	25,397	83,000	244,958	531,217
1980/81	5,500	55,995	2,500	68,500	11,500	23,906	95,000	250,739	513,640
1981/82	6,000	88,885	2,500	98,100	13,000	24,775	110,000	216,502	559,762
1982/83	8,000	79,730	3,300	75,000	16,000	32,898	95,000	246,463	556,391
1983/84	7,000	81,740	4,000	103,000	9,120	29,839	100,000	328,980	663,679
1984/85	5,800	70,327	6,200	67,000	6,934	28,545	80,000	273,805	538,611
1985/86	5,500	93,736	9,000	90,000	20,000	37,685	120,000	284,715	660,636
1986/87	6,500	63,991	9,000	69,000	21,145	30,659	110,000	236,317	546,612
1987/88	6,600	74,029	16,500	40,000	11,250	27,448	110,000	303,947	589,774
1988/89	7,000	60,000	24,500	77,800	11,000	20,639	150,000	315,862	666,801
1989/90 1/	8,000	58,000	26,000	83,600	7,000	30,650	130,000	363,250	706,500

1/ Preliminary.

NOTE: U.S. data on packed weight basis. Data for Afghanistan and Iran not available.

WINTER GRAINS PRODUCTION IN NORTHWEST AFRICA  
ALGERIA, MOROCCO, AND TUNISIA

The countries of the Maghreb Region in Northwest Africa, although subject to similar climatic conditions, are politically and economically diverse. Agricultural structures and policies vary from collective farms in Algeria, where inputs are scarce, and mechanization and technical assistance limited--to the small private operations in Morocco which are facing significant cuts in production subsidies and must adjust cropping patterns based more on grain prices than Government programs.

Foreign Agricultural Service analysts traveled through the major winter grains regions of Algeria, Morocco, and Tunisia during April. Discussions with producers, private sector representatives, research scientists, and Government officials are reflected in this report.

ALGERIA

Production Factors

The Algerian coastal range production area is characterized by ample rains and mild winters, but represents less than a 100-kilometer strip along the coast, and is sprinkled with relatively densely populated areas. The Steppes area, between the Mediterranean coast and mountains, has production possibilities, but the terrain is heavily sloped, rains are more irregular, and erosion is a serious problem.

This northern tier accounts for virtually all cultivated grains in the country, about 2.3 million hectares. Once coined the "breadbasket" of North Africa, average yield for all grains has fallen well below 1.0 ton per hectare. Greater demand for barley and low Government controlled wheat prices have tended to boost barley area at the expense of wheat.

Production practices have suffered a series of problems over the last 25 years, including inadequate inputs, lack of technical expertise, management inexperience, and policy uncertainties. In 1989, the Government of Algeria began a major reorganization of the agricultural sector, dismantling state farms while offering autonomy and a more market oriented approach for farmers. This reorganization has led to as much fear as enthusiasm and the newly formed independent farm cooperatives are taking a cautious approach to production. Production input shortages have driven up prices on everything from fertilizer to spare parts. In many cases, as with equipment and parts, products are simply not available. Moreover, many of the newly independent producers are lacking basic expertise in managing their operations, such as securing credit and procuring and managing operating inventories.

During the April assessment of crop conditions, farmers in the coastal region, near Tenes, commented frequently about the poor quality of seed available for purchase. Government officials recognize the problem and are making efforts to improve seed quality.



More than Tunisia or Morocco, Algeria is dependent on timely rains. Less than 4 percent of arable land is irrigated and little had been accomplished until very recently to improve water management. In 1985 the Government of Algeria began a project to build 35 dams -- the first such effort in 20 years.

Coupled with these factors, Algeria is suffering from its third consecutive drought. Little or no rain fell in the major growing area from January until the end of March, 1990. Despite normal plantings, harvested area will be significantly below average as farmers either have abandoned or plowed under the worst affected crop areas. Although rains arrived in April, they were likely too late to significantly improve yield prospects.

### Grains Outlook

Arable land area is relatively fixed in Algeria, although yields could probably triple under improved conditions. The recent Government of Algeria policy shifts toward a more open market approach to agriculture are expected to improve production over the longer term. However, until producers have reliable access to sufficient inputs, from credit to seed, yields will be largely dependant on timely rains.

General growing conditions for 1990/91 have been fair to poor. Crops throughout the central and western coastal region were observed severely stunted and brown. Even in some isolated areas receiving adequate moisture, wheat was heading prematurely. During the 1990/91 crop year, drought is expected to reduce total grain production to 1.5 million tons, 12 percent below the production of a year ago.

## MOROCCO

### Production Factors

Morocco's rich coastal plain runs east-west from the Atlantic to the Atlas Mountains and almost 500 kilometers north and south. Although temperate in climate during spring and fall, irregular rainfall and a sharp temperature gradient south toward the Sahara result in water being the key factor for grain yield. This is particularly true for barley production. However, unlike Algeria, Morocco has maintained an impressive irrigation system covering hundreds of thousands of hectares. It is supplied by retaining dams and administered by the provincial Governments.

Nearly 90 percent of the cultivated area is held by small land holders with 20 hectares or less. Relative to its neighbors, Morocco enjoys a mechanized farming sector with 80 percent of the land prepared by machine, although the majority of seeding is done by hand. Much of the harvesting is contracted to the Government or private sector and many crops are purchased in the field.

Production inputs are normally available during planting, but farmers complain that high prices of fertilizers, herbicides, and pesticides limit applications. Although yields are the highest in northwest Africa, approaching 1.5 ton per hectare in good years, small, capital restricted producers tend to minimize use of agrochemicals. Of total seed used for planting, only 25 percent is certified. This represents the highest percentage of certified seed use in the Maghreb.

The general trend in Morocco is less Government intervention and greater producer autonomy. Although the Government continues to subsidize inputs, these subsidies are being reduced. The Government has set 1992 as the year to end financial assistance to agriculture producers. This may be delayed, but it indicates the Government's intention to minimize subsidies in the agricultural sector.

Morocco plants more grain area each year than Algeria and Tunisia combined, roughly 5.3 million hectares.

### Grains Outlook

Since the mid-1980's, the Government of Morocco has encouraged bread wheat production through price incentives for flour. As a result, area planted to soft wheat has increased significantly. However, this program is winding down and Government officials indicated that soft wheat planted area is not expected to increase significantly in the near future. Moreover, the near doubling of barley prices over the last 6 months is expected to encourage shifts from wheat to barley next season. The 1990/91 crop outlook remains fair to good. Ample rains during the fall in some cases delayed plantings, but overall the crop began the season on a positive note. Hot, dry weather set in during January and lingered through March, affecting the crop to a greater degree in the Central Southern growing areas. In turn, barley has been drought-damaged more than wheat, as barley plantings are more extensive from Settat to Marrakech. Current estimates for the 1990/91 Moroccan grain crop place overall production at about 5.9 million tons, 1.4 million tons below last year's bumper harvest.

## TUNISIA

### Production Factors

Tunisia has two major growing areas for agricultural products. The northern and coastal regions generally experience adequate rainfall, with a Mediterranean climate. It is highly productive, with many large and relatively sophisticated farms. This region is small, extending from the western coast to the central Kairouan area, on a 60-kilometer belt. In contrast, the central and southern regions feature small subsistence farms and less reliable rainfall. Each of these two areas represents about 50 percent of land planted to cereals, with yields significantly higher in the north coastal regions where wheat is predominate over barley.

Greater resources and more sophisticated practices are the norm in the northern region, where producers take advantage of technical improvements and high yielding varieties to make farming quite profitable. National yields for wheat, which averaged slightly below 1.0 ton per hectare from 1980-89, ranged to about 3.0 tons per hectare for northern commercial operations. In sharp contrast, is the south central region. Although subsidized by the Government to the same extent as their northern counterparts, grain farmers have no access to irrigation and are entirely dependent upon the rains. Many growers insist that a sufficient quantity of rainfall occurs once every 10 years in this region. This was such a year. Unfortunately, it all fell in a 2-day period and flooding damaged about 10 percent of the barley crop between Kasserine and El Kef.



Although seed and fertilizer are subsidized by the Government, most central dryland farmers minimize applications due to lack of rain. Each region does have an agricultural development office, but technical expertise varies and is limited. Until greater development resources can be directed to improve water management, Tunisia's grain production will continue to be rainfall driven.

#### Grains Outlook

During planting, soil moisture throughout the country was generally considered adequate. Except for the brief flooding in isolated sections of central Tunisia, weather turned hot and dry from January through March. This represents the third consecutive year of drought reduced crops for Tunisia. Tunisia's 1990/91 crop is expected to reach 0.7 million tons, 0.1 million tons above last year's level, but far below the 1.9 million ton level of 3 years ago.

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Robert Beyer (202) 382-9172

Table 20  
ALGERIA: GRAIN PRODUCTION  
1980/81 – 1990/91

	Area (1,000 Ha)	Yield (Tons/Ha)	Production (1,000 Tons)
Barley			
1980/81	945	0.84	794
1981/82	1,297	0.63	818
1982/83	815	0.59	483
1983/84	718	0.62	444
1984/85	1,171	1.11	1,295
1985/86	1,200	1.08	1,300
1986/87	1,212	0.89	1,083
1987/88	1,089	0.75	820
1988/89	674	0.58	390
1989/90	1,150	0.70	800
1990/91 May	1,050	0.67	700
Wheat			
1980/81	2,071	0.73	1,512
1981/82	2,074	0.62	1,295
1982/83	1,637	0.60	977
1983/84	1,400	0.57	794
1984/85	1,724	0.95	1,646
1985/86	1,735	0.96	1,660
1986/87	1,520	0.81	1,230
1987/88	1,511	0.78	1,175
1988/89	1,023	0.60	614
1989/90	1,255	0.68	850
1990/91 May	1,190	0.63	750
TOTAL GRAINS			
1980/81	3,182	0.76	2,418
1981/82	3,509	0.62	2,186
1982/83	2,568	0.59	1,525
1983/84	2,224	0.58	1,289
1984/85	3,049	1.00	3,051
1985/86	3,127	0.99	3,089
1986/87	2,872	0.84	2,404
1987/88	2,754	0.75	2,076
1988/89	1,807	0.57	1,036
1989/90	2,507	0.68	1,701
1990/91 May	2,322	0.64	1,491



Table 21  
MOROCCO: GRAIN PRODUCTION  
1980/81 – 1990/91

	Area (1,000 Ha)	Yield (Tons/Ha)	Production (1,000 Tons)
Barley			
1980/81	2,150	1.03	2,210
1981/82	2,228	0.47	1,039
1982/83	2,047	1.14	2,334
1983/84	2,151	0.57	1,228
1984/85	2,126	0.66	1,405
1985/86	2,383	0.93	2,225
1986/87	2,472	1.44	3,563
1987/88	2,315	0.67	1,543
1988/89	2,499	1.38	3,454
1989/90	2,399	1.25	2,999
1990/91 May	2,000	1.00	2,000
Wheat			
1980/81	1,713	1.06	1,811
1981/82	1,647	0.54	892
1982/83	1,686	1.29	2,183
1983/84	1,976	1.00	1,971
1984/85	1,856	1.07	1,989
1985/86	1,894	1.08	2,050
1986/87	2,226	1.71	3,809
1987/88	2,288	1.06	2,427
1988/89	2,317	1.73	4,019
1989/90	2,630	1.49	3,927
1990/91 May	2,730	1.28	3,500
TOTAL GRAINS			
1980/81	4,348	1.02	4,437
1981/82	4,326	0.48	2,077
1982/83	4,238	1.15	4,872
1983/84	4,652	0.76	3,529
1984/85	4,456	0.84	3,723
1985/86	4,774	0.98	4,678
1986/87	5,170	1.51	7,781
1987/88	5,049	0.85	4,291
1988/89	5,297	1.50	7,928
1989/90	5,489	1.34	7,373
1990/91 May	5,248	1.13	5,949

Table 22  
TUNISIA: GRAIN PRODUCTION  
1980/81 – 1990/91

	Area (1,000 Ha)	Yield (Tons/Ha)	Production (1,000 Tons)
Barley			
1980/81	382	0.77	296
1981/82	443	0.61	270
1982/83	395	0.86	339
1983/84	631	0.48	303
1984/85	580	0.54	312
1985/86	821	0.84	686
1986/87	241	0.55	132
1987/88	639	0.84	537
1988/89	151	0.42	63
1989/90	412	0.49	200
1990/91 May	350	0.60	210
Wheat			
1980/81	853	1.02	869
1981/82	783	1.23	963
1982/83	714	1.28	916
1983/84	931	0.66	618
1984/85	900	0.79	711
1985/86	1,033	1.34	1,380
1986/87	540	0.88	474
1987/88	971	1.40	1,360
1988/89	299	0.74	220
1989/90	557	0.75	420
1990/91 May	615	0.84	515
TOTAL GRAINS			
1980/81	1,235	0.94	1,165
1981/82	1,226	1.01	1,233
1982/83	1,109	1.13	1,255
1983/84	1,563	0.59	922
1984/85	1,481	0.69	1,024
1985/86	1,855	1.11	2,067
1986/87	782	0.78	607
1987/88	1,611	1.18	1,898
1988/89	451	0.63	284
1989/90	970	0.64	621
1990/91 May	966	0.75	726



CHART 1

# WHEAT PRODUCTION IN SELECTED NORTH AFRICAN COUNTRIES

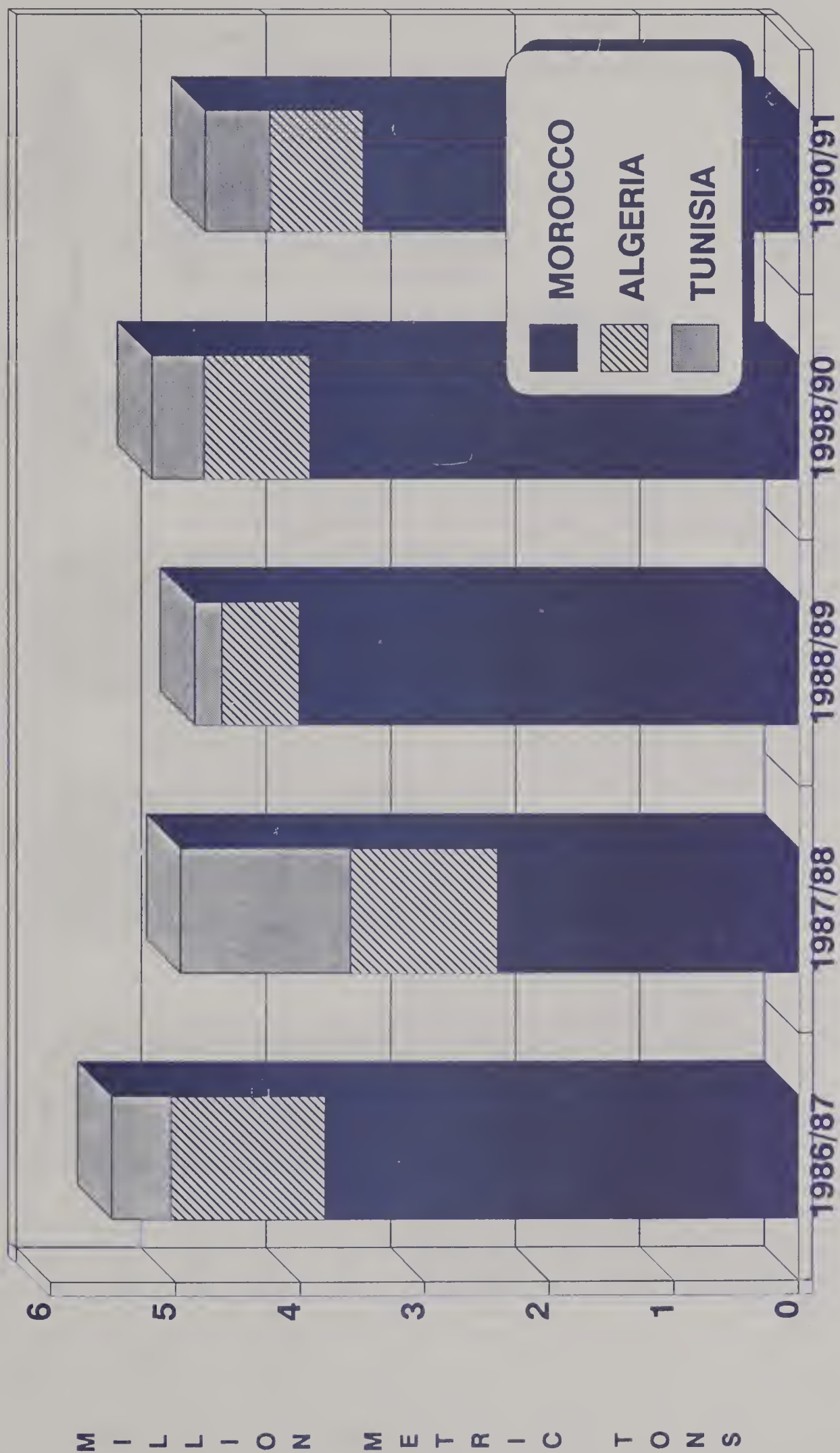
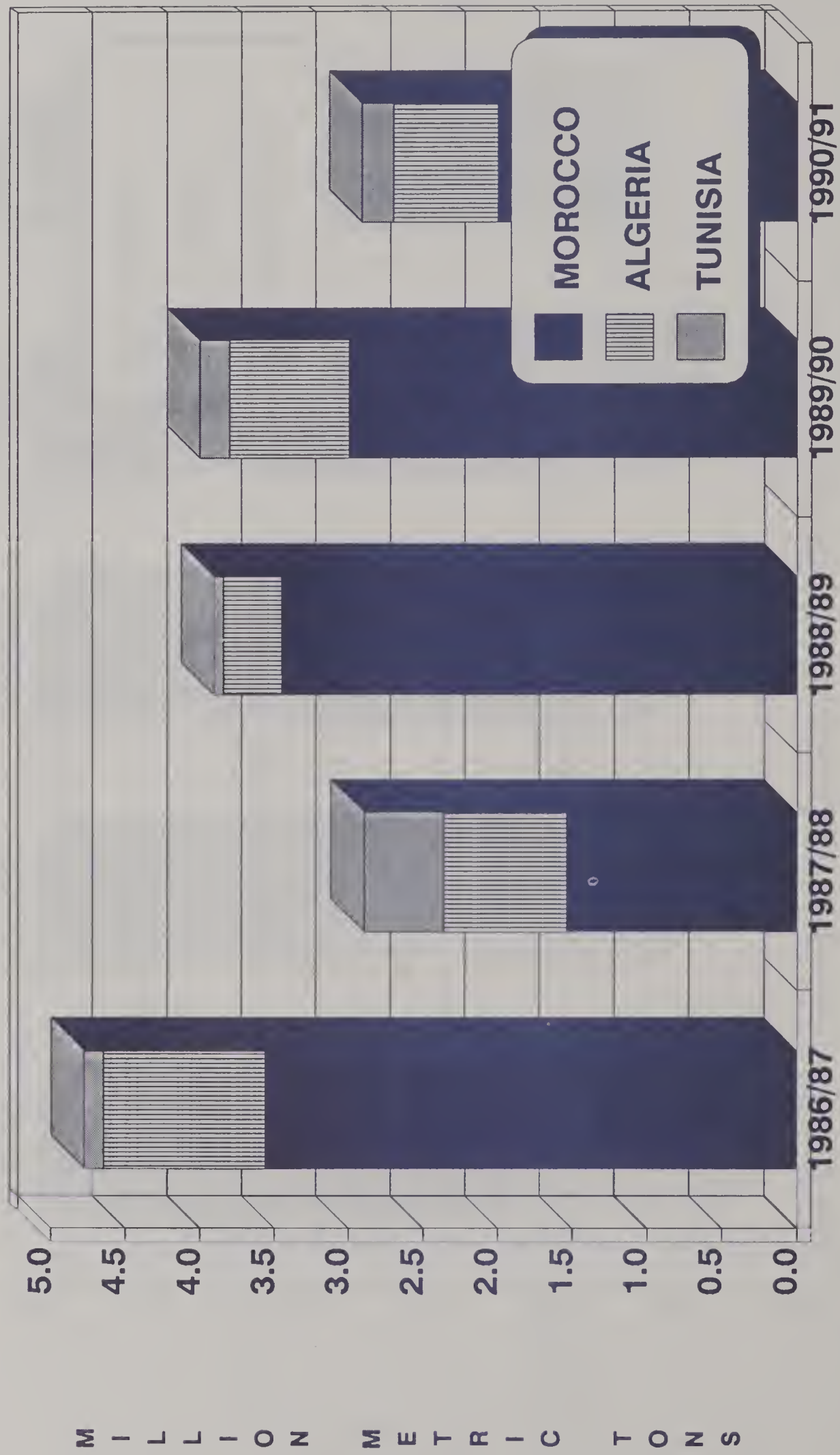


CHART 2

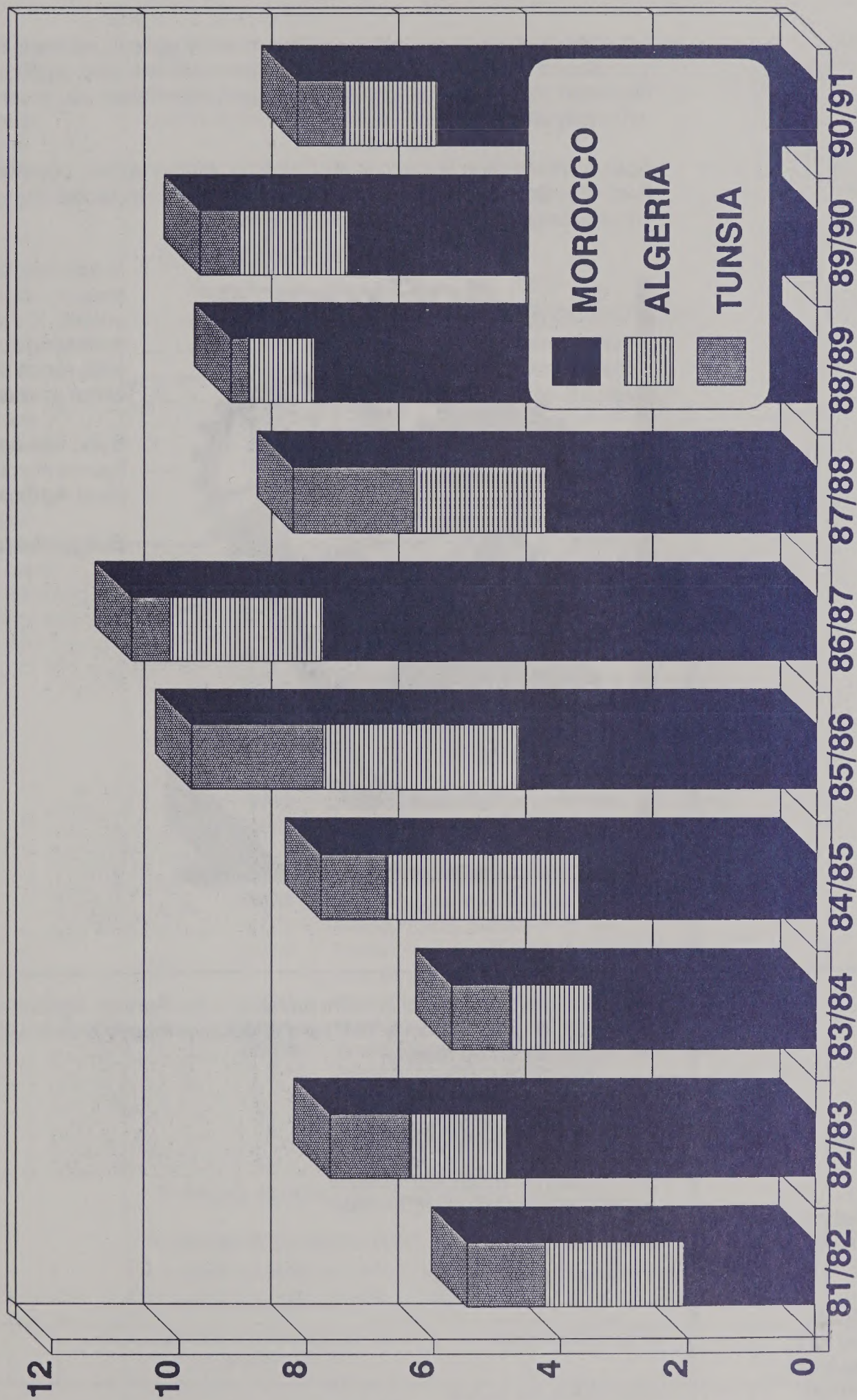
# BARLEY PRODUCTION IN SELECTED NORTH AFRICAN COUNTRIES





# TOTAL NORTHWEST AFRICAN GRAIN PRODUCTION

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